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The Management Journal Covering North America's Wood Pulp, Paper and Cellulose Industries.

EDITORIALS

"One Way Street" to Russia

WO representatives of the Russian pulp and paper industry, I. D. Tevetkov and V. S. Solomko, both engineers, the first from Leningrad, the other from Moscow, have been visiting American pulp and paper mills as guests of the management. The two were accompanied by Joseph Timoner, New York City, as interpreter and companion.

Various mills throughout the country have been, or will be, as hospitable and courteous to these two engineers as any other visitors—perhaps giving them more than the ordinary access to information on machinery and methods. They are here to study these matters with a view to reconstructing Russian mills destroyed by the German armies.

The visitors have stated that there are plans in Russia for extending pulp and paper production because of the tremendous demand for paper, but neither could indicate the true extent of the projected expansion.

This is not worrying most American producers as there will be markets for all as commerce and literacy spread in the world.

But what concerns Americans and Canadians is the one-way funneling of information to Russia and the obstacles placed in the way of their compatriots obtaining similar information in Russia. Mutual confidence and co-operation, so necessary for future peace, just can't be built on that kind of a basis. Perhaps technicians will some day break down this barrier.

How to Divide Newsprint

Two ways to meet a newsprint crisis are manifest in Rumania and Argentina. The U. S. public and its publishers are not yet ready to accept either.

In Soviet-controlled Rumania, newspapers critical of the regime were warned that newsprint was short, might get shorter for the critical. In Argentina, mills were ordered to turn over 600 tons to newspapers supporting the party in power.

That's one way of relieving the paper companies of the problem of dividing up their limited supply. Even though U. S. mills usually just get abuse for their attempts to treat all the newspapers fairly, they still don't favor these methods of settling their problems.

The Continental View

IT IS impossible to put your finger on just one "center" for the pulp and paper industry on a map of North America. There are several great regions of production. Not any one is subordinate to the other.

This is the view taken editorially by this magazine and we are gratified to find such an important institution as the Bulkley, Dunton organization in apparent agreement.

A beautiful little book entitled "Papermaking In America", which that company has just published, takes a truly "North American" view of this great industry. Its book is the kind any paper company executive would be proud to have in his library.

It is noteworthy that the book gives space commensurate with their relative importance to the industry in the U. S. Southern and Pacific Coast regions.

The 22 excellent scratchboard drawings recall the smuggling of felts and wires into the South during the War Between the States; the establishment of one of the oldest mills on Soap Creek, Georgia; the part Editor Pittock of Portland, Ore., had in starting the industry in the Far West, and also the pioneering of the biggest sulfite mills in the world by Ossian Anderson.

WAR VETERANS AND SENIORITY—

There Are Many Shades of Opinion Regarding Obligations of Mill Management And the Unions

That old and already much battered-about subject of endless arguments in pulp and paper mill executive offices and union halls—seniority—is taking another “beating” these days in connection with the re-hiring of World War II veterans.

Just exactly what is the obligation of the pulp and paper companies and of the unions to these men?

Is it enough to return a veteran to the job he left, or its equivalent if that job doesn't exist? That is the only obligation that exists under the “letter” of the laws which have been passed in the U. S. and Canada, but does it comply with the “spirit” of those laws?

Or, should the veteran be rapidly promoted to the job that would have been his, under seniority rights, if he had remained at the mill? Should this be done even though it means “bumping” other employees; maybe demoting as many as six or eight of them?

A survey made by PULP & PAPER INDUSTRY editors among representative mills in several important industry regions—in the East, the South and the Pacific Coast of United States and in Canada, indicates:

1. Several large companies have set up specific programs for recognizing the seniority of such veterans and promoting them to the positions they would have held, providing they show fitness. Time limits are fixed; in many cases, a six months' period.

2. But many others are wary of any general ruling or rigid policy, while at the same time being careful to give veterans every break possible. The issue in some mills such as these has nothing to do with the veteran; it is merely the insistence of management on its freedom to promote at will. In some big mills, where there is more choice of jobs, it is sometimes possible to advance veterans without “bumping” others.

Between these two extremes there seems to be many different shadings of practice and opinion on this subject. In certain departments of a mill, “ladder” promotions or rapid promotions are impractical.

It may be said for most mill managers and the unions, too, that they

did not wait for the army of returning vets to swarm back in these past few months before tackling the problem. The managers and union committees were debating the question as long ago as 1940 and 1941. The thoughts and the words that have been given to this problem, if strung out end on end—well, it might be compared with radar contact with the moon.

One way of looking at, the advancement of many of those who remained in the mill was possible because the veterans went to war. But, on the other hand, would all of the latter group have remained in the mill, or would they have succumbed to shipyard or other war job enticements, if they hadn't gone to war? And, what of the obligation to those who stuck it out with the mill?

AFL Questions Policy

As for the question of strict seniority rule interpretation—aside from any reference to veterans—a research committee of the International Brotherhood of Paper Makers, AFL, has raised some serious questions as to its merits.

There is a refreshing frankness in this committee's report, written after it spent many months seriously studying the causes of “labor unrest and dissatisfaction.”

The committee said its own union members over the country were asking whether seniority was destroying initiative among employees. If seniority rather than ability decides promotions, will it mean eventual wage reductions as companies lose efficiency, production and income? If employees rise only up one vertical line of promotion, what chance have they to gain wide knowledge of operations and become executives? Is seniority building a wall between management and employees, so that management must train its own management personnel or draw it from outside the mill?

Does it mean the office boy and not the broke hustler will some day be mill manager?

The union committee urged union members to suggest some “solution” to the problem, and warned that “the time is fast approaching when

something must be done on this question.”

The above quoted report dealt with the problem in a general way and was not specifically concerned with the veteran, but today he finds himself in the vortex of it. Many mill managers are convinced that some form of seniority—like the unions themselves—“are here to stay.”

Another factor in the picture, as far as the veteran is concerned, is that there are some recorded instances of where he has come home with army or navy acquired skills and these have been recognized.

What South Is Doing

Most Southern U. S. pulp and paper mills are reinstating veterans with as little fanfare as possible and following an open policy in respect to would-have-been promotions. Displacement of wartime personnel is reported by some mills as having been minimized by expansion programs or by careful scheduling.

A mill in Southeast U. S. says its current policy is simple reinstatement of the veteran in his old job with advancement policy not fixed. A Texas mill is guaranteeing only “ladder” job advancements and it reports that the informality of its method of receiving veterans is appreciated by the latter. Some of these southern mills have several hundred veterans returning and they have had some worries over the readjustments, and are trying to accomplish the job with a minimum of hardship to those who have been employed.

Where Southern mills have reached agreement with unions as to recognizing seniority of returning veterans, a number of conditions have been carefully worked out. In some departments of the mill, longer periods of time are required to make the advancement than in others. There are special reservations made for veterans who may return at a later date with higher seniority than those now employed, which may entail “bumping” the latter.

In Northern Mills

In the Northeastern U. S. mills, the majority are attempting

to analyze each veteran's case independently. The Oxford Paper Co. has a merit rating system, applied to veterans individually as they return, whereby he finds his position improved if it improved during his absence.

In most eastern mills, it is reported that there has been no difficulty experienced with men who must step down for returned veterans as this was pretty generally understood as the program in cases where it has happened.

In the Middle West, Minnesota and Ontario Paper Co. was one of the first to announce a very thoroughly worked out program for advancement of veterans and where the veteran shows ability this may be accomplished within a period of six months, even advancing several positions in that period of time. The M & O program was published in detail in *PULP & PAPER INDUSTRY* several months ago. Similar programs have been adopted in other large midwestern mills.

On Pacific Coast

The general plan in the Crown Zellerbach mills on the Pacific Coast calls for return of the veteran to the position he would have held had he not entered the armed forces. The Camas, Wash., mill of Crown Zellerbach Corp., because of its large employment roll with an honor roll of 780, has a Veterans Placement Committee consisting of a personnel department representative, the safety supervisor, a representative of each union and a secretary from the personnel department. Foremen are called before the committee and their knowledge of returning men, ratings, etc., is considered in employment, transfer or advancement.

There is no uniformity of opinion on the Pacific Coast any more than in any other region on how best to handle this problem. Certain mills are strongly against any rigid adherence to seniority. Sometimes transfers to other departments or the offering of new opportunities in new additions or, expanded facilities of the mill solves the veterans problem.

The Canadian mills have, in many cases, proportionately more veterans to find jobs for. And they probably have, on the whole, been making their plans farther in advance.

It has been a common practice in the Canadian mills to appoint special personnel executives to handle the problems of the returning veterans. Or, in some cases, committees have taken on the job.

As long ago as November, 1944,

CONCERNING OUR COVER PICTURE . . .

This is the first time a statesman has appeared on the cover of *PULP & PAPER INDUSTRY*, but with him is shown a gentleman who has long been prominent in the industry in Canada and Newfoundland.

Colonel William Frank Clarke, shown in the picture with his distinguished guests, was president of the Gulf Pulp & Paper Co., at Clarke City, Quebec, where groundwood pulp is manufactured, until his recent semi-retirement.

With Lord Rothermere, the Canadian who went to London to become a famous newspaper publisher, Colonel Clarke also organized the Anglo-Canadian Pulp & Paper Mills of Quebec, manufacturer of groundwood, sulfite and news. Colonel Clarke was vice president of this company.

He was also a director of Clarke Steamship Co. and Anglo-Newfoundland Development Co., with mills at Bishop's Falls and Grand Falls, Nfld. (groundwood pulp is pumped 12 miles from Bishop's Falls to the main mill at Grand Falls and mixed with pulps made there to produce newsprint).

The Churchills went directly to the home of Colonel Clarke at Miami Beach, Fla., on arriving in the U. S. and have made that home their headquarters during a long vacation this winter.

Powell River Co. began organizing for the return of some 560 employees which it was obligated to re-employ. It also determined at that time to give any other applying veterans jobs. It was not expected to be an easy matter, and it hasn't been one, either.

Over a year ago, the company applied for the release from the army of an assistant beater room superintendent who had done his bit in bitter fighting in Italy and got him back to Powell River in advance of the returning vets, setting him up as a director of veteran reemployment. Obviously the plan was to have a real veteran deal with the veterans.

At this mill, some veterans have jumped as many as five promotions

under their seniority rights. Some have needed further training before they could be advanced. The system in effect at Powell River calls for a close follow-up procedure over a six months period, during which checks are made on whether the veteran is satisfied, how he is progressing and if he needs special training.

From the reports that *PULP & PAPER INDUSTRY* has received from mills through its field staff, this conclusion seems upheld—where the mill management, the union and the veteran himself are all cooperating fully, and in good faith, there actually isn't any serious problem.

Fernandina Mill Will Make Board

Container Corp. of America recently announced in Fernandina, Fla., that alterations to be effected in their mill there would convert it from pulp to both pulp and board manufacturing. The additions will include a 160-inch Fourdrinier board machine and a power plant.

The mill now has capacity for 190 tons daily of kraft pulp and will have virtually an equal daily capacity in paperboard.

Present plans call for a conversion project stretching over at least 12 months, with first board production scheduled for early 1947. During this period there will be no personnel reduction in the local plant, since all conversion will be graduated to the extent that when final conversion is completed there will be no noticeable halt in production of the local plant. The Fernandina plant was erected in 1937.

Headquarters of the company are at 111 West Washington St., Chicago, Ill.

C. R. Hunsicker is plant manager at Fernandina; A. H. Stier, assistant manager and timber manager, and R. E. Phinney, chief engineer.



R. E. PHINNEY, Chief Engineer of Container Corporation of America mill at Fernandina, Fla., which is expanding and adding a finished product unit. Changes include installation of a 160-inch trim Fourdrinier paperboard machine, increased pulp productive capacity and power plant. Company announced it will continue to purchase quantities of kraft board from other mills. Ground was broken for building before Christmas with completion planned in early 1947.

Snow in West Means Less Pulp in East; Four Puget Sound Mills on 5-Day Week

A group of four pulp mills on the eastern shore of Puget Sound which, as a group, are ordinarily able to produce from 25 to 30% of the total market pulp produced within United States, are operating today on only a five-day week. And, at that, it's a "slow bell" short week, too, for at least one big mill.

The reason—snow and ice on the western slopes of the Cascade Mountains, where nearly all their available timber grows. Most of these logging operations have been paralyzed since October 20 and fresh snowstorms early this month virtually blotted out whatever faint hopes they had of starting up again before March or April.

This situation, of course, is not only a severe blow to these four pulp mills but also to the many eastern paper mills dependent on them for a major portion of their pulp supply.

Under the best conditions, operating a seven-day week, these four mills—Soundview Pulp Co., Puget Sound Pulp & Timber Co., the Kraft Pulp Division of St. Regis Paper Co., and the Anacortes Division of Coos Bay Pulp Corp. (Scott Paper Co. subsidiary)—are capable of producing well over 35,000 tons a month, perhaps as much as 37,000 tons.

On their present 20-day "slow-bell" month, they will be doing well if they run off 22,000 to 24,000 tons. It takes time to start up their big machines each week and, besides, they are eating deep into inventories and must stretch out their log supply.

The situation has forced the cancellation of orders for thousands of tons of their pulp. The rated capacities of these four pulp mills totals 1,300 tons per 24-hour day of which about three-fourths is sulfite pulp and the remainder sulfate, including about equal amounts of bleached and unbleached grades in both categories.

St. Regis Reopens

The situation was even worse for more than two months this winter. From Nov. 28 until Feb. 5, the big St. Regis sulfate pulp mill at Tacoma was completely shut down, probably losing about 15-16,000 tons of production. Every log in its pond, sparing only the boomsticks, was sent through the mill before Walter

CANADIANS AGAIN SHIP TOKEN LOGS

The Canadian Timber Control will again permit only a "token" shipment of 32,500,000 ft. of hemlock and balsam logs to American mills on Puget Sound in 1946—just a fraction of the peak years shipments just before 1943. But this time there will be no attempt to apportion this small amount—it will be open to all comers.

The Sloan commission has recommended that in the future all exports of hemlock logs be discouraged and that hemlock be graded with concomitant increases in royalty rates.

However, the commission also noted that a market in the United States exists for over-mature hemlock which can be used for pulping.

"It is my opinion," states Chief Justice Gordon Sloan, chairman of the commission, "that the government would be justified in waiving all claims to royalty on over-mature interior hemlock stands in order to encourage their removal so that new growth of more valuable tree species could come in."

DeLong, vice president and manager, and his staff were forced to give up in the face of the AFL loggers' strike which cut off their sources of supply.

The strike ended in early December but by that time snow and ice got in their dirty work. The strike had shut down Lewis County logging as early as Sept. 22, and it probably cost the St. Regis mill 6 or 7,000,000 ft. of logs. St. Regis is operating again, but its position is a precarious one and the five-day production week is forced upon this company because its main logging site at Mineral, Wash., is still snowed in and will be for many weeks.

Principal logging operations of the three sulfite mills—two of which are rated as among the biggest mills of this type in the world—were not affected by the strike. These operations are mainly in Whatcom and Skagit counties, where CIO woodsmen stayed on the job and negotiated their wage increases. But winter storms hit these camps first and hardest and right now is normally the season for even heavier snowfall.

It might be well to explain right here why snow halts Pacific Coast

logging, whereas it is welcome to the pulpwood producers of Quebec and eastern United States and, in fact, helps them.

Snow west of the Cascades is wet, slushy, soggy and heavy. It won't hold up the big, heavy trucks which the western loggers must use to get out the big timber of their country. Worse still, the snow softens up the roads and any attempt to operate the big trucks churns up the roads. This year, each time snow has been plowed off the roads, another fall has quickly followed to dishearten the loggers.

Soundview called its crews back to the woods five times and each time storms came up, preventing them from working. Puget Sound Pulp & Timber crews had similar experiences.

Leo S. Burdon, general manager of Soundview, said throughout 1945 his company was able to log only an aggregate of six of the twelve months and because of labor shortages was able usually to muster only about 65% of the usual crew force.

In recent years, the mills on the west side of the Cascades have had to work into higher and higher ground to obtain their timber. This has made winter logging even more difficult as they were forced to operate at steeper grades and in heavier snow areas. Logging operations now are accessible only over grades of 5 to 10% and when snow falls it becomes simply impossible to drive the big trucks up such slopes.

The only other producer of market pulp on the eastern shores of Puget Sound is the Everett, Wash., mill of Weyerhaeuser Timber Co. Most of its pulpwood comes from lower areas and, therefore, this operation is not feeling the pinch as much as the others. For this reason and also because it is a smaller producer than Soundview, Puget Sound and St. Regis, requiring less wood, it is able to carry on a six-day week schedule.

But its log supply is low and, in comparison, the other Weyerhaeuser pulp mill in Longview, on the Columbia River, is operating seven days a week. Rayonier and Fibreboard mills on the Olympic peninsula also are operating seven days but the Crown Zellerbach newsprint mill is on six days. Practically all logging operations feeding these

mill are in fairly low ground, rarely over 1400 feet elevation, but even so, most of the mills are eating into log inventories.

Labor Picture Brighter

There is just one bright spot in the future picture for all of these mills. The U. S. Employment Service, at last, reports an easier labor market and says in a short time there will be plenty of loggers available—at least it will seem a plentiful force in comparison with the skeleton crews of war years.

In this kind of a winter, with heavy snows and the forests dripping moisture day after day, it is not pleasant work in Pacific Coast logging camps. Especially, for men who have had a taste of dry work, indoors, in war plants.

There is every indication that US ES optimism is justified as the "vacations" of the war workers seem to be about at an end and more and more men are looking for work.

There are many other factors which have made the going tough for the big pulp mills of the West. The day when hemlock was virtually a drug on the market is in the dim, dim past and today lumber mills are competing aggressively with pulp mills for the remaining stands which are in increasingly inaccessible areas.

Since 1942, Canada has cut off the Puget Sound mills from timber resources from across the border, including some that were owned by subsidiaries of American mills. Only a token shipment of about 32,000,000 ft. (58,000 cords) is permitted annually, and it doesn't amount to much when divided among several mills. In just seven years, imports by Puget Sound mills of Canadian hemlock and balsam had climbed from virtually nothing to 190,000,000 ft. in 1941 and, understandably, perhaps, this had alarmed Canadian officialdom as well as Canadian operators.

Rising Costs

Other difficulties faced by the western U. S. operators have been the locking up of forests in national parks, the rising costs of stumpage, increasing costs of operating logging camps in higher ground and in face of higher wages and the ceiling prices on logs, all of which have gradually blotted out any open market in hemlock. Only operators who have end products which can absorb logging losses, such as lumber, plywood or pulp and paper, are carry-

ing on and only those who have been foresighted enough to acquire timber stands when they were available years ago can look forward with any tranquility to the future. Most of the big pulp mills are, fortunately, in this latter category, but they must husband their resources from now on and organize their operations as rapidly as possible on a sustained yield basis.

They are helping themselves by development of hydraulic barking, new slab barking equipment and other inventions that enable them to make their wood go farther and there is not one of these companies which is not anxiously waiting for sufficient manpower to enable them to put into practice better forestry.

Cost of hemlock stumpage today is \$2.50 to \$3.00 per thousand feet, about five times higher than it was before the war. The costs of logging hemlock and delivering it to the mill are from \$25 to \$30 per thousand feet and yet the OPA ceilings for hemlock range from only \$21 to \$23 per thousand feet, depending on grades.

A recent boost averaging about \$1.50 on the hemlock prices was checkmated by the wage boost granted to loggers in December of 15 cents an hour, establishing a new record high base wage of \$1.05. Costs of logging may ease slightly in the spring under better operating conditions but there is still going to be a wide margin, at least in hemlock, between the OPA ceiling and actual costs.

As a result of this situation, there just isn't any open market and independent loggers have been driven from the woods. Costs and prices may seem an academic issue when no market exists, but they are not at all academic to the pulp and paper mills, whose end products are also under ceiling prices.

Hemlock production in the Puget Sound area has been extremely low with an inventory of only 69 million feet in August, 1945, as compared with 111 million feet in August 1944, a drop of 42 million feet.

Government representatives interviewed by PULP & PAPER INDUSTRY concede that most factors tend to retard hemlock logging, which is important to the pulp mills, more than Douglas fir logging. The limited number of loggers available prefer to work in high grade fir stands, as peeler logs in fir tend to increase the average return well above that for hemlock. On the other hand—excepting peeler logs—

it costs more to log hemlock because of larger and heavier logs, smaller stands per acre and heavier cost of operation changes. Truck logging costs are heavier and winter costs are at least \$2.50-\$3 more per thousand feet because of obstacles and stoppages.

"If the recent ceiling price increase and the new cubic foot measure for trees under 13 inches had both been in effect last summer, they would have increased pulpwood supply," said Fred Brundage, Pacific Coast log and lumber administrator for CRA and formerly WPB. He predicted that "these two factors will combine to exert a beneficial effect next summer."

The cubic foot measure is used in place of the board foot scale, to encourage more production of small wood, now largely left on the land in the West because it has been uneconomical to remove. Several pulp and paper companies have begun using this wood.

St. Regis Employs 300

The shutdown of more than two months of St. Regis' mill was the second time in a little over three years that it has been closed for a long period. A 17-month shutdown of that mill from Nov. 1, 1942, to March 27, 1944, the result of a War Production board log allocation order arising out of the critical log shortage which developed in 1942 and 1943. Reopening was made possible when President Roy Ferguson announced that St. Regis had acquired logging rights to 45,000 acres of West Fork Timber Company lands and 65,000 acres of adjacent public land timber, all in Lewis County.

Resumption of operations at St. Regis this month gave employment to about 300. Although no official statement has been issued on production, a 20-day work month will mean that this mill will do well if it pushes monthly production substantially over 5,000 tons. This will be half bleached and half unbleached sulfate pulp.

Under Vice President DeLong, among the men who may be mentioned as sharing responsibility at the mill for the resumption of operations are Herman Gevers, advisor to Mr. DeLong; A. C. McCorry, superintendent in charge of cooking, washing and drying of pulp; James Ruck, superintendent in charge of recovery, and Bert Doolittle, sawmill superintendent.

"PAPER WEEK" PROGRAM SPREAD AMONG FIVE MANHATTAN HOTELS

Big Industry Luncheon on Feb. 27 at Waldorf attracts many; D. K. Brown's President's dinner same day; Gunnar Nicholson becomes new President of TAPPI, with Commodore banquet on Feb. 28.

It's more than a week-end at the Waldorf this February. It's a whole week—the first postwar Paper Week—and not only at the Waldorf-Astoria, but at the Commodore as well, and with programs overflowing into the St. Regis, the Pennsylvania, and the Barclay.

But in this February of 1946 almost every first-class New York hotel, and many a second and fourth, are harboring pulp and paper executives during Paper Week. Not this year are delegates, officials, and the rank and file of AP&PA and TAPPI membership all "headquartered" cozily in the convention inns. They are literally all over town, for never was New York City so bursting at the subway seams and, consequently, the hotel situation more acute.

Some weary visitors who wish to stay more than the allotted five or six days are rotating among three or four hostelleries. For, in meeting assembled, most hotel owners have agreed this winter to keep guests on the *qui vive* and transients on the move.

Willy-nilly, like many another big city, New York is getting known as very inhospitable. Although some of the aimless travel has lessened, troops are still being moved, many another industry wants to make up for lost time with a rousing convention, salesmen are hitting the road again, and buyers have come to buy. It is in this hectic scene that Paper Week now competes for accommodations—but everything is unrolling like newsprint at the press.

Although it is the first peace-time Paper Week since 1943 it is still not a true national convention, although all regions are represented and action is being taken that will affect the national organization of both TAPPI and AP&PA. But transportation and accommodations are still too tight to allow for the crowd that might come in a "normal" year.

Nevertheless, enough pulp and paper men are now gathered in New York to make it appear that the whole great industry is centering there from the 24th of this month to the first day of March. The appearance is slightly deceptive—for the industry as a whole is still a superintendent in, say, Bogalusa, a

chemist in Longview, a machine tender in Port Angeles, and maybe a paper salesman in San Francisco or a woods manager in Maine. It is all of these, and more, whether or not they got to New York this month for Paper Week.

The Program

Nevertheless, the various interests of Paper Week, with a Chemical Exposition as a side show, are busy in Manhattan. Things begin on Sunday, the 24th, when the various divisions (toilet tissue, paper towel, wrapping, jumbo) of the Tissue Association get together at the Waldorf, closing with a board of governors dinner in the Carpenter Suite. At the same time there will be meetings of the U. S. Pulp Producers Association in the Jansen Suite.

Important committees in the American Paper & Pulp Association meet on Monday, the 25th, starting

at 8:30 a. m. and include finance, industrial relations, public relations, pulpwood, biological control, and the forestry committee. In the afternoon is the annual meeting of the Blotting Paper Manufacturers Association in the Crane Room of the Waldorf.

At The Commodore, on the same day, is the annual meeting and luncheon of the Coated and Processed Paper Association. The big joint meeting of the National Council for Stream Improvement, with all the regional chairman present, is taking place on this day at the Waldorf. The Salesmen's Association, the Sulfite Association, and the Writing Paper group also convene on Monday there.

Tuesday, February 26, features the Pulp Consumers in Le Perroquet Room, the Groundwood Paper Manufacturers in the Carpenter Suite, and the Kraft Paper Association in the Pillemente. On the same day the Waxed Paper Institute holds forth at the Hotel Pennsylvania, and the Writing Paper men hold their 85th annual meeting and dinner at the St. Regis.

The big Industry Luncheon, where everybody gets together, is being held in the Grand Ballroom of the Waldorf on Wednesday, the 27th. And D. K. Brown's "President's dinner" is in the evening in the Carpenter Suite.

On Wednesday, too, are the meetings of the Glassine and Grease-proof Manufacturers group, the American Pulpwood Association, and the Newsprint Manufacturers Association. The Glassine men have their annual meeting and luncheon on the following day, the 28th, and on this same day is the meeting of the Forest Industries Council.

That, in brief, is the program under AP&PA, but already there are minor changes—as E. W. Tinker, executive secretary of AP&PA, warned there must be in a series of programs so large and interlocking. The wonder everywhere is that Paper Week is proceeding so smoothly, and a lot of compliments are flying toward the AP&PA and the TAPPI staff and their industry committees. What makes the wonder more is that only a few weeks ago

Ritchie Joins Office Of U. S. Pulp Producers



J. L. RITCHIE,
appointed
Asst.
Executive
Director of
U. S. Pulp
Producers
Association.

J. L. Ritchie has been appointed assistant executive director of the United States Pulp Producers Association, 122 East 42nd Street, New York, and took his new office January 1.

Mr. Ritchie came from AP&PA where he was assistant to the executive secretary. A graduate of Williams College in 1928, and of Harvard Law School, Mr. Ritchie practiced law at North Adams, Mass., until he joined AP&PA in 1934. From August, 1941, to September, 1943, he was chief of the distribution section of the pulp and paper division of WPB at Washington, D. C. He returned to AP&PA until the first of this year.

these men were returning from a week-long national gathering of Canadian TAPPI at Montreal (see next page) and this 1946 Paper Week was arranged in a period of readjustment to a civilian world and in the midst of general industrial upheaval.

This year when James d'A. Clark, industry consultant, awards the TAPPI medal he does it without the silver leaf of lieutenant-colonel. Back in civilian clothes on terminal leave, Mr. Clark awards the honored medal to W. G. McNaughton, veteran technician now with the News Print Bureau, at the TAPPI banquet on the 28th. Presiding at the banquet will be outgoing president Vance Edwardson, sulfite superintendent at the I. P. Palmer, N. Y., mill, who turns the chieftain's feathers over to Gunnar Nicholson, vice president of Union Bag & Paper Corp.

It is generally conceded that 1943 was the last "normal" Paper Week, although a goodly crowd appeared the following year and among the features was a big open forum at which Rex Hovey, Jim Madden, and Dave Graham, all early workers in the vineyards at Washington, told of the things in store for the industry as war time controls increased.

This year there will still be some curtailments. The salesmen's and wholesalers meetings will not take place this year parallel with Paper Week. Entertainment suites sponsored by the mills will therefore be at a minimum. Due to the great demand for space there will be few suites sponsored by the equipment and supply firms as was the custom in the old peace time days.

It isn't quite the three-ring circus of other years, this February of 1946. But it's a great show, nevertheless. And never did the industry face greater times or greater problems—both of which are being discussed and faced as this issue reaches its readers.

Many convention-goers were planning to see the technicolor films on the TAPPI program—"Paper, Pacesetter of Progress," produced for F. C. Huyck & Sons, Albany, N. Y., makers of Kenwood felts.

Historical aspects of the film were directed by Dard Hunter, and the film depicts in graphic fashion not only the development of paper making from earliest times but also its many places in the world today. There is a sequence illustrating the contribution of paper in World War II.



AT THE BIG CANADIAN MEETING in Montreal (see next page):

Top row (left to right): Cole G. Parker, President of Kimberly-Clark Corp., Neenah, Wis., and of Kimberly-Clark Corp. of Canada (Kapuskasing mill); Charles Vining, Chairman of Newsprint Assn. of Canada; F. G. Robinson, President of Riordon Sales Corp., and Guy Hout, Canadian Govt.'s Newsprint Administrator.

Lower row: E. W. Tinker, Executive Sec'y., American Paper and Pulp Assn., New York; George Barber, Sec'y-Treas., Spruce Falls Power & Paper Co., and George L. Carruthers, Asst. Gen. Mgr., Interlake Tissue Mills.

Paper Firms and Suppliers In N. Y. Chemical Show

With the opening of "Paper Week" in New York comes a "side show" in the shape of the 1946 Exposition of Chemical Industries running Feb. 25 to March 2 at the Grand Central Palace, and simultaneously with the programs of AP&PA and TAPPI.

The exhibits are featuring at least two paper companies, and many supply and appliance firms serving the industry. The Chemical show is among the first of the postwar industrial expositions to be run at the once always busy Palace. During the war the Palace was also busy, but for the purposes of induction for the armed services rather than industrial displays.

Many new products and processes created by the war are out from under wraps and on display at the Exposition on Lexington Avenue, and the show is providing opportunity for personal contact and business conferences between principles, technical staffs, manufacturers and professional consultants. At Grand Central Palace headquarters, PULP & PAPER INDUSTRY was told that the more than 300 exhibitors who showed at the last Palace exposition (in 1941) are on the new roster, and that there are a number of additions which cause the 20th Exposition to top all others.

There was a chemical show held two years ago in Madison Square Garden, but this is the postwar return to the Palace.

Among exhibitors observed at the opening: St. Regis Paper Co., Union Bag & Paper Corp., American Cyanamid Co., Paper & Industrial Appliances, Inc., Bird Machine Co., Blaw-Knox Corp., Combustion Engineering Co., Container Corp. of America, Dorr Co., Dow Chemical Co., Foster-Wheeler Corp., General American Transportation Co., Goslin-Birmingham, Inc., Hercules Powder Co., Nash Engineering Co., Swenson Evaporator Co. and Oliver United Filters.

The advisory committee of the exposition includes many leaders in the scientific and chemical field. M. C. Whitaker, vice president of the American Cyanamid Co., is chairman; and other members include J. V. N. Dorr, president of Dorr Co.; R. Gordon Walker, vice-president of Oliver United Filters, Inc., and E. R. Weidlein, director of Mellon Institute.

Several firms which exhibited in recent years are absent from the 1946 show due to the early rush for space and the difficulty of arranging forceful and informative exhibits in time for the exposition opening, it was pointed out by C. F. Roth, manager.



ATTENDING CANADIAN MEETINGS in Montreal last month:

Top row, left to right: A. E. H. Fair, Alliance Paper Mills, retiring member of Executive Committee of Technical Section; Dr. Allen Hill, who presided at Technical sessions; D. Manson Sutherland, President, Sutherland Refiner Corp., Trenton, N. J., and Col. H. Wyatt Johnston,

Sutherland Refiner Canadian Representative with offices in Montreal. Lower row, left to right: A. E. Cadman, General Manager, Canadian Pulp & Paper Assn.; Douglas Jones, Secretary-Engineer, Technical Section; D. B. Jones, Ontario Paper Co.; K. S. LeBaron, John Inglis Co.; D. B. Foss, Consolidated Paper Co.'s General Superintendent at Grand Mere.

100 MILLS ARE REPRESENTED AT BIG MONTREAL MEETING

Paper suggests use of hardwoods in newsprint, wins \$1,000. Three Fraser Companies' men elected to key offices. Symposium by European investigators.

More than 800 delegates, representing nearly 100 mills in Canada, the United States and Newfoundland contributed to making the first postwar convention of the Canadian Pulp and Paper Association in Montreal, January 23, 24 and 25, a record-breaker not only in attendance but in the number and high caliber of the papers delivered and the variety of the subjects dealt with effectively.

The convention, held in the crowded Mount Royal Hotel, was notable for the keen interest demonstrated in all the discussion groups and for the evidence of unity among all branches of the industry.

Need for a strengthening of this spirit and practice of co-operation was highlighted in the address of Robert M. Fowler, president of the association, read by Charles Vining, president of the Newsprint Association of Canada, at the annual luncheon. Mr. Fowler was unable to attend owing to the death of his father in Peterboro, Ont.

"The pulp and paper industry has

a great opportunity and a great responsibility," Mr. Fowler had written. "As Canada's greatest industry, free as we are from serious wartime dislocations and readjustments, the pulp and paper industry, if it can work together with a common purpose, can be a great constructive force in Canadian industrial life. It can spearhead the development of new levels for international trade."

Mr. Fowler's address also made a plea for a more realistic approach to the price situation in Canada. "After all," he wrote, "adequate production is more effective than any price control system to prevent inflation."

The shock of de-control, when it finally came, might be seriously and unnecessarily damaging. A gradual price de-control would make continued stability possible, he said.

During the luncheon, presided over by R. L. Weldon, Bathurst Power & Paper Co., it was announced that Aubrey Crabtree, president and general manager of the Fraser Companies, had been chosen as chairman of the association's ex-

ecutive board, with C. R. Whitehead, Consolidated Paper Corp., for the newly created post of honorary vice chairman in recognition of his long and loyal service to the industry.

Mr. Crabtree's election rounded out a sort of triumvirate for the Fraser Companies, for this organization was also honored with the election of two of its officials as chairmen of the technical and woodlands sections.

Members of the association's new executive board are: L. J. Belnap, Consolidated Paper Corp.; George W. Brown, Gair Co.; Wentworth Brown, Brown Corp.; G. L. Carruthers, Interlake Tissue Mills; G. T. Clarkson, Abitibi; Paul E. Cooper, Pacific Mills; Harold Foley, Powell River Co.; G. Gordon Gale, E. B. Eddy Co.; Elmer Herb, Westminster Paper Co.; J. H. Hinman, Canadian International; C. H. L. Jones, Price Bros.; R. P. Kernan, Donnacona Paper Co.; E. M. Little, Anglo Canadian Pulp & Paper Co.; A. Bar-

nett Maclarens, James Maclarens Co.; J. R. S. McLernon Dryden Paper Co.; F. G. Robinson, Riordan Sales Corp.; J. Pierre Rolland, Rolland Paper Co.; W. Earle Rowe, Great Lakes Paper Co.; C. H. Sage, Spruce, Falls Power & Paper Co.; Arthur A. Schmon, Ontario Paper Co.; A. F. White, St. Lawrence Paper Mills and Mr. Crabtree.

Mr. Weldon was honored at a presentation ceremony for his services to the industry. He continues as an ex-officio member of the board with Mr. Whitehead and E. H. Smith of Howard Smith Paper Mills.

Technical Section

New chairman of the technical section, Canadian Pulp and Paper Association, is W. H. Birchard of Fraser Companies, Edmundston, N. B., whose associate R. G. MacFarlane, of the same company, was chosen to head the woodlands section.

Retiring chairman is Dr. Allen C. Hill, technical director of Anglo Canadian Pulp and Paper Co.

Two new councillors were elected for a three year period—J. M. Fear, Gaspesia Sulphite Co., and F. J. Griffen of Canadian International Paper Co., Montreal. Retiring from the council was A. E. H. Fair of Alliance Paper Mills.

Remaining members of the council are R. J. Askin, Abitibi Power & Paper Co.; E. J. Cadman, Ontario Paper Co.; A. J. Philip, Canada Paper Co. and C. D. Jentz, St. Lawrence Paper Co.

A feature of the session at which this election was announced was the presentation by Arthur A. Schmon, president of Ontario Paper Co. of a check for \$1000 to George Shipman, Donnaconna Paper Co.'s groundwood superintendent, for a paper suggesting utilization of hardwood species of eastern Canada in the manufacture of newsprint.

Competition for this award was thrown open to pulp and paper technicians everywhere. Mr. Shipman's method entails the employment of semi-bleached kraft chemical pulp made from birch, in addition to mechanical pulp made from poplar to provide a 40 per cent portion of hardwood usage. Shipman believes that this method will produce a newsprint sheet equal in appearance and printability to newsprint presently manufactured entirely from soft wood.

In making the presentation Col. Schmon said that the process might be of great economic as well as technical significance as birch and pop-

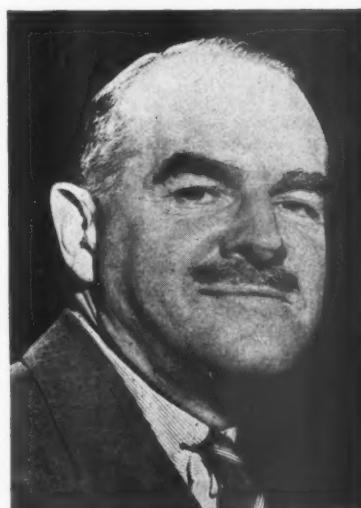


AUBREY CRABTREE, President and General Mgr., The Fraser Companies, Edmundston, New Brunswick, elected Chairman of Canadian Pulp & Paper Assn. for 1946-7.

lar were widespread in the east and as softwood species were cut the hardwoods showed a tendency to dominate the forest.

The I. H. Weldon Memorial Gold Medal to the author of an outstanding technical paper, donated by A. L. Dawe, Consolidated Paper Co., was won by F. A. Garrett, Canadian International Paper Co., Three Rivers. His paper was on pressing and press crown rolls.

The technical section service award, presented annually to the technical committee chairman judged to have furthered the interests of the organization most and donated by R. L. Weldon of Bathurst Power & Paper Co., was won by J. M. Fear, Gaspesia Sulphite Co.,



COL. JOHN H. PRICE, Vice President of Price Bros., at the annual meeting of the Canadian Association. Col. Price was taken prisoner by the Japs at Hong Kong where he was serving with his regiment at outbreak of war with Japan.



R. L. WELDON, President of Bathurst Power and Paper Co., and retiring Chairman of Canadian Pulp and Paper Association, receiving the Association's award from E. HOWARD SMITH for meritorious service during term of his office.

chairman of the sulfite committee.

A warning that demand for fine paper in Canada will continue to exceed supply was uttered by G. W. Earnshaw, chairman of the book and writing paper committee. New productive capacity cannot become effective in less than a year and a half.

The papers presented to the three day sessions of the technical section covered a wide range of subjects. In the first morning meeting A. Hellstrom, of Fraser Companies, described the use of absorption towers for the recovery of low pressure relief in sulfite pulping; F. H. Yorston and T. R. Moore surveyed pulping variables in the sulfite process; G. F. Allo of Bathurst Power & Paper Co., reviewed alkaline pulping in Canadian mills and J. N. Swartz of Howard Smith Paper Mills dealt with the bleaching of sulfate pulp.

(Mr. Allo's paper is on page 62.)

A trio from the west coast—I. H. Andrews, S. A. Collicutt and R. C. Bledsoe—participated in the afternoon session with a paper based on their experience at Powell River, B. C., on the function of the pulpstone grinding surface. An interesting, chart-illustrated analysis of stock chest agitation was given by J. J. Keon of Wm. Kennedy & Sons, Owen Sound. A. E. Montgomery of J. O. Ross Engineering Co. described paperboard drying methods.

Studies of rosin sizing were the subjects dealt with by D. Price and D. D. Cameron, Hercules Powder Co., and F. W. Locker and L. G. Durrant of the E. B. Eddy Co. spoke on "A Stain for the Identification of Bleached Sulfite and Bleached Sulfate Fibers."

On the second day, J. Foster, Anglo Canadian Development Co., discussed the use of Vortraps for the removal of dirt from sulfite pulp. F.



Some of these traveled farthest to attend the Montreal convention. Left to right—G. Harold Fisk, representing Powell River Co. and Pacific Mills, Ltd., in eastern Canada; David G. Stenstrom, Secretary-Manager, western branch, Canadian Pulp and Paper Assn., Vancouver, B. C.; Harry Andrews, Technical Director, Powell River Co., William Cramb, Beater Room Supt., Powell River Co.; Paul E. Cooper, President, Pacific Mills, Ltd.; R. H. R. Young, Resident Manager, Pacific Mills, Ocean Falls, B. C.



NEW EXECUTIVE COUNCIL OF WOODLANDS SECTION of Canadian Pulp & Paper Association: Front row, left to right: W. D. Bennett, Asst. Mgr., Woodlands Section; Gordon Godwin, Vice Chairman, Quebec North Shore Paper Co., Montreal; R. G. MacFarlane, Chairman, Fraser Cos., Ltd., Edmundston, N. B.; D. F. Avery, immediate past Chairman, Great Lakes Paper Co., Fort William, Ontario; M. R. Kane, Price Bros., Quebec City; C. C. Atkinson, Fraser Cos. Ltd., Edmundston, N. B.; W. A. E. Pepler, Quebec Forest Industries Assn., Quebec City.

Back row, left to right: W. A. Delahey, Ontario Forest Industries, Toronto; C. B. Davis, Abitibi Power & Paper Co., Toronto; Francois Faure, Consolidated Paper Corp., Montreal; Maj. Gen. Howard Kennedy, Ontario Paper Co., Ltd., Montreal; A. Koroleff, Manager, Woodlands Section, Montreal; and J. V. Perrin, Brown Corp., Quebec City.

J. Lang, Dexter Sulfite Co., and John Evafis, of the sulfite committee of the association, spoke on Jonsson screens as sulfite knotters and sulfite yield from wood, respectively, while J. N. Swartz of Howard Smith Paper Mills, collaborated with I. H. Andrews, of Powell River Co., in a paper on Flakt dryers for sulfite.

Those taking part in the wood chemistry discussions included: H. B. Marshall, Ontario Research Foundation; J. McK. Limerick, Bathurst Power & Paper Co.; A. J. Corey, Fraser Companies, and Clark

C. Heritage, of Wood Conversion Co. and Weyerhaeuser Timber Co., in Cloquet, Wis., and Longview, Wash.

Among the subject on the final day's program were: Trends in industrial relations, Prof. J. C. Cameron, Queen's University; relationships between the chemical industry and the paper industry, G. I. Hoover, Provincial Paper Co., and technical approach to pulp and paper mill slime control, J. A. Holmes, National Aluminate Co.

J. H. Ross gave a progress report on the alkaline pulping research project at the Pulp and Paper Research Institute of Canada. C. S. V. Hawkins, Price Bros. & Co. led off a discussion of sulfite for board, and panel discussions followed on engineering, fine papers, groundwood and wood chemistry.

European Symposium

European developments in the field of pulp and paper manufacture during the war years formed the theme of discussion at one of the technical sessions of the Canadian Pulp and Paper Association in Montreal, participated in by a group who at different times during the past few months and under various auspices went overseas to see at first hand what was being done in Germany, the Scandinavian countries, the United Kingdom, Holland and Belgium.

Those who took part in the symposium, under the chairmanship of Dr. Allen C. Hill, technical director of Anglo Canadian Pulp and Paper Co., who himself toured Europe recently, were: Dr. W. Boyd Campbell, Pulp and Paper Research Institute of Canada; Gerard Laroque, News Syndicate Co.; Dr. Ferdinand Kraft, Marathon Paper Mills of Canada; George Balko, Mead Corp., Chillicothe, Ohio, and J. N. McGovern, U. S. Forest Products Laboratory, Madison, Wis.

Generally speaking, the report brought back by these observers was that war interfered with the European industry only to the extent that labor and material shortages curtailed output and prevented the execution of technical improvements. Very little damage had been caused

to the mills, even in Germany. But wartime conditions had encouraged ingenuity and thus had developed several novel improvisations which might be found useful for permanent adoption.

Dr. Campbell, who made his tour with Dr. Hill, and covered some 2500 miles on the continent, visited twelve mills in Germany. He reported that Germany had been desperately short of wood and that its own forests had been overcut. Owing to the scarcity of coniferous species, German mills had made important progress in the use of beech and other short fiber hardwood, from which rayon staple fiber had been produced. One complication in this connection was that beech in the sulfite process did not yield the rich liquor that could readily be converted into alcohol. However, it had been found that hardwood liquor would produce yeast and this had been done on an extensive scale. (A complete, illustrated article on this process was published in *PULP & PAPER INDUSTRY* last month).

Drs. Campbell and Hill also visited Norway, Sweden and Finland. In Sweden they had been impressed by the emphasis on cleanliness in the mills and the devotion to research. Barking was done before the wood went to the mills, mostly by hand barker or motor driven tools. Wide use of stainless steel in the mills was notable, especially in places where in North America brass or lead would probably be employed.

"The standards of engineering in Scandinavia seemed generally higher," said Dr. Campbell.

Mr. McGovern of Madison had also been fascinated by the utilization of beech in Germany, which he said represented about three quarters of the dissolving pulp production. Three large mills accounted for about 89% of Germany's sulfite production.

Most of the wood in Germany was barked by hand in the woods or by knife barker, he said, adding that all mills he visited utilized waste liquor to some extent. Generally speaking, he found the German sulfite industry less advanced than in Canada, the United States or Scandinavia, but it was well geared to the country's economic level.

Dr. Kraft, some of whose views were published in *PULP & PAPER INDUSTRY* in December with Niles M. Anderson, vice president and general manager of Marathon Paper Mills of Canada, from Europe, said that the mills of Scandinavia compared favorably with those of this country in efficiency but not in mechanization. Scandinavian mills



AT CANADIAN INDUSTRY MEETING

Top row, left to right: J. V. Perrin, Brown Corp., Quebec; R. G. MacFarlane, new Chairman of Woodlands Section, Fraser Co.'s, Ltd., Edmonton, N. B., and Dr. Otto Maass, General Director, Pulp & Paper Institute of Canada.

Middle row, left to right: J. O. Sisler, Abitibi Pulp & Paper Co., Sault Ste. Marie; J. F. Brown, Thunder Bay Pulp & Paper Co., Fort William, Ont., and E. J. Corriveau, Ontario, and Minnesota Paper Co., Fort Frances, Ont.

Bottom row, left to right: P. W. Neil, Quebec North Shore Paper Co. of Baie Comeau, Que.; Raymond Boucher, Canadian International Paper Co., Hawkesbury, Ont.; F. X. Guimond, Canadian International Paper Co. (Gatineau mill), and C. G. Malcolm of E. B. Eddy Companies (Booth mill), Hull, Quebec.

handle longer logs in their barking drums than in Canada or the United States. He saw one new type of barker, operated with chains and handling one log at a time. It weighed only 6 tons, was readily mobile and did a good job in the woods.

Dr. Laroque was in Europe for the War Production Board and his main object had been to observe methods of newsprint manufacture and newspaper printing. He admired the spotless condition of Scandinavian mills, even though some of their machines were extremely old. The important place held by research in the industry was also remarkable; at one mill that produced only 300 tons daily, 40 to 50 persons were employed in laboratory and research work.

To compete with the radio, Dr.

Laroque said, there might be a continuing tendency in the United Kingdom to use light newsprint with special ink for airmail editions. He thought this paper could be produced from groundwood.

"Technical efficiency in Scandinavia and the United Kingdom may not be equal to this country's," said Dr. Laroque, "but here and there they have developed some new gadget or technique that represents a real improvement, and the fact that they are more research-conscious may be due to their more limited resources.

"One technical expert told me over there—'You'll take more chances in America. If your first method or installation isn't satisfactory you'll scrap it.' And he added rather sadly—'We can't afford that

way of doing things over here. We must take a little longer and hope to get it right the first time."

Mr. Balko found paper manufacture in Europe had made little real advance during the five or six years of war. Conditions were naturally worst in the occupied countries, where Germany had made huge

levies for fuel, where transportation was disorganized, raw materials, labor and food were in short supply and depreciated money offered little incentive.

Woodlands Section

R. G. MacFarlane of the Fraser Companies, Ltd., Edmunds-

ton, New Brunswick, is the new chairman of the woodlands section, Canadian Pulp and Paper Association, succeeding B. F. Avery, woods manager of Great Lakes Paper Co., Fort William.

Vice chairman is Gordon Godwin, Quebec North Shore Paper Co., Montreal, who has spearheaded the efforts of eastern Canadian mills to increase mechanization in the forest.

Councillors are C. B. Davis, Abitibi Power & Paper Co., Toronto; G. Harold Fisk, Powell River Co.'s representative in the east; F. Faure, Consolidated Paper Co., Montreal; Verne E. Johnson, Canadian International Paper Co., Montreal; M. R. Kane, Price Bros., Quebec; J. B. Matthews, Provincial Paper Co., Port Arthur; H. G. Shanche, Brown Corp., Berlin, N. H.; C. C. Atkinson, Fraser Companies, Edmundston, N. B.

Serving ex-officio are B. F. Avery of Great Lakes; W. A. E. Pepler, manager of Quebec Forest Industries, Montreal; W. A. Delahey, manager, Ontario Forest Industries, Toronto; J. O. Wilson, Anglo Canadian Pulp & Paper Co., Quebec.

At the annual luncheon meeting awards were made to men in the industry for outstanding accomplishments during the past year.

Ontario Paper Co.'s award to the man who had contributed most to the promotion of power logging was presented by President Arthur Schmon to Gordon Godwin of Quebec North Shore Paper Co., Price Bros.' award, presented by M. R. Kane of that Company to J. O. Wilson was in recognition of his studies in forest management; Brown Corp.'s award, presented by James V. Perrin of that company, went to Louis L. Wetmore of Price Bros. for effective industrial application of research; Brompton Pulp & Paper Co.'s award was made in the absence of General Manager P. H. Scowen by A. Koroleff, manager of the section, to Charles Ross Silversides, for the latter's meritorious work in forest conservation, with special reference to spruce and balsam.

At the woodlands section's business session, a message from President Fowler, of the association, stressed the importance of a progressive approach to forest problems

General Howard Kennedy of Ontario Paper Co., said a new pulpwood production problem in Quebec is the campaign for an eight-hour day. "It may soon be mandatory for us in Quebec to use more unskilled workers at fewer hours," he declared.



AT CANADIAN INDUSTRY MEETING in Montreal in late January:

Top row, left to right: J. D. Brown, Sproat Waldron Co., Munsie, Pa., W. Holland of North Shore Paper Co., Baie Comeau, Que., and G. E. Shipman, Donnacoma Paper, Donnacoma, Que., who was awarded \$1000 by Ontario Paper Co. for paper on utilization of hardwood in manufacture of newsprint.

Second row, left to right: Frank Silver, Price Bros., Quebec, Mowberry Jones, Mersey Pulp & Paper Co., Liverpool, N. S., and C. P. Reaper, Canadian Ingersoll-Rand, Montreal.

Third row, left to right: Arthur Schmon, President, Ontario Paper Co.; Elliott M. Little, President, Anglo-Canadian Pulp & Paper Co., and R. J. Askin, Manager of Mills, Abitibi Pulp & Paper Co.

Bottom row, left to right: Mrs. Claire Jones Lamont, Chemical Engineer, North Eastern Paper Products, Quebec; John Evans, Technical Assistant, CPPA, Montreal; Miss A. M. Johnson, Research Chemist, Ontario Research Foundation, Toronto, and C. K. Logan, McGill University.

They're Very "Iffy"--Those Forecasts Of Record 1946 Paper Production

Preliminary figures of the U. S. Bureau of Census have been issued disclosing that U. S. paper and paperboard production in 1945 was 17,374,000 tons—second highest year in history and exceeded only by 1941's 17,762,365 tons.

Despite uncertainties in the changeover from war to peace and continued shortages and restrictions, the 1945 production exceeded 1944 by about 200,000 tons.

What are the prospects for 1946? Let's take a look at the APPA, U. S. Pulp Producers and Department of Commerce forecasts.

E. W. Tinker, executive secretary of American Paper & Pulp Association, says that barring raw material shortages and crippling strikes, an increase of about 1,000,000 tons, evenly divided between paper and board, can be anticipated, which would bring the 1946 figure to about 18,300,000. The demand is certainly there, he said, but he cautioned that there can be no assurance of raw material supply.

He said these factors threaten to curb production: (1) lack of woods labor to replace war prisoners; (2) lack of incentive because of pulp price ceilings affecting U. S., Canadian and Scandinavian sources and (3) the usual Baltic freeze-up curtailing Swedish pulp shipments.

Oliver M. Porter, executive director of the U. S. Pulp Producers Association, agrees there is no assurance of enough pulp for a million-ton paper production increase in 1946, although paper mill capacity and consumer demand.

Pulp demand will exceed supply during the first six months of 1946, said Mr. Porter. He holds out the hope that this may ease only during the last six months of the year.

Paper production at the rate achieved in the last quarter of 1945 can be maintained, he said, only in event the mills are willing to operate on "the pulp-starved furnish ratios of the last two years of war." This would mean inferior quality, which is hardly what is expected in peace time.

The U. S. Department of Commerce has issued a prediction that U. S. paper and board production "will amount to 18,000,000 tons in 1946 and that imports from Canada will exceed 3,000,000 tons," with domestic U. S. requirements 25% high-

er than in any former peace time year.

The Census Bureau reported U. S. woodpulp consumption totaled 10,822,633 tons in 1945, compared with 10,502,204 tons in 1944 and 10,635,320 tons in 1943.

It reported wood pulp production in the U. S. alone as 10,164,868 tons in 1945 compared with 10,108,443 in 1944 and 9,680,462 in 1943.

Here are the hard facts of pulp supply as issued by U. S. Pulp Producers:

ESTIMATES WOOD PULP SUPPLY			
	Last 6 Months of 1945	First 6 Months of 1946	
Imports from Canada	560,000	440,000	
Imports from Europe	625,000	360,000	
U. S. Production	4,940,000	4,800,000	
Total	6,125,000	5,600,000	
Pulp stocks on hand at U. S. mills	250,000 tons on July 1, 1945, and		
	495,000 tons on Nov. 1, 1945.		

Opie Hayes Is Back In Office Regularly

E. J. "Opie" Hayes, office manager of the St. Regis Paper Co.'s Kraft Pulp Division in Tacoma, Wash., is in good health again and on the job regularly after suffering two sieges of illness from a heart ailment last year. He is also pleased to have his son, who was wounded in military service in Africa, at work in Tacoma.



CHARLES G. FRAMPTON, who has retired as Superintendent of Fernstrom Paper Mills, Pomona, Calif., but will continue to serve company in advisory capacity.
RICHARD S. BUCKLEY has been promoted to Superintendent.

Superintendents to Meet In Maine June 17-20

Poland Spring, Maine, has been chosen as the 1946 convention site for the national gathering of the American Pulp & Paper Mill Superintendents Association—and the dates are June 17 to 20.

Reservations may be mailed via the association headquarters at 220 East 42nd St., New York 17, and PULP & PAPER INDUSTRY was told there that present indications are that the attendance will break all records. Arrangement has been made with the Poland Spring management for all available space in Poland Spring House, Mansion House, Ricker Inn and Summit Spring Hotel. Blanket reservations for several rooms cannot be accepted, the association says, due to the popularity of the area in the month June. The hotel arrangements make it more feasible to arrange for parties of three or four than parties of one or two, and the association asks for the names of those with whom you would be willing to share such arrangements when making your own reservation.

Site of the 1946 meet had been a matter of conjecture for some weeks, and it was finally decided to return to the location of two previous conventions after considering problems of transportation, meeting space and hotel accommodations.

Wolf Appointed By State Governor

R. B. Wolf, manager, Pulp Div., Weyerhaeuser Timber Co., Longview, Wash., has been appointed to a board to be known as the Washington State Forest Products Institute, created and headed personally by Governor Wallgren of that state.

The purposes of the institute is to encourage closer use of wood resources and development of needed wood products. Serving with the governor are nine leaders from industries, forest agencies and unions.

Charles Stehman Becomes Soundview Master Mechanic

Charles Stehman has been promoted to master mechanic at Soundview Pulp Co., Everett, Wash., it is announced by Leo S. Burdon, general manager.

Mr. Stehman succeeds John Moak, who has moved to West Linn, Ore., to take a position in connection with the construction work at the Crown Zellerbach mill there.

A long-time employee of Soundview, Mr. Stehman earned his appointment by regular promotions, his last position being that of head machinist.

BROWN COMPANY ANNOUNCES PLANS TO MAKE SULFATE PULP

New 196-inch towel machine being made by Rice, Barton and General Process Div. of GAT is supplying causticizers, digesters, evaporator.

Late in January, Frederic G. Coburn, president of Brown Co., announced in New York official word of the expansion program at the Berlin, N. H., mills.

Installation of a 196-inch paper machine, built by Rice, Barton, is included in the program. It will produce towels at 1200 feet per minute.

New sulfate pulp producing facilities are included in the new equipment. The General Process division of the General American Transportation Company is supplying the lime kiln, causticizers, digesters, blow tanks, and evaporator. Capacity of the new sulfate mill will be 60,000 tons annually.

Northeastern Mill Trend

The shifting emphasis in some of the upper New York and New England mills from spruce and soft woods and the sulfite process to the use of hardwoods in new and improved sulfate pulping processes has been previously reported. Just one example of this trend is the Brown Co. program announced by Mr. Coburn.

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Hardwood pulps, according to a U. S. Forest Service, are superior to softwoods for some types of paper. Glassine sheets containing as much as 80% semi-chemical pulp, have been made experimentally with excellent results and crepe tissues of good quality have been produced with 90% hardwood.

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They're Very "Iffy"--Those Forecasts Of Record 1946 Paper Production

Preliminary figures of the U. S. Bureau of Census have been issued disclosing that U. S. paper and paperboard production in 1945 was 17,374,000 tons—second highest year in history and exceeded only by 1941's 17,762,365 tons.

Despite uncertainties in the changeover from war to peace and continued shortages and restrictions, the 1945 production exceeded 1944 by about 200,000 tons.

What are the prospects for 1946? Let's take a look at the APPA, U. S. Pulp Producers and Department of Commerce forecasts.

E. W. Tinker, executive secretary of American Paper & Pulp Association, says that barring raw material shortages and crippling strikes, an increase of about 1,000,000 tons, evenly divided between paper and board, can be anticipated, which would bring the 1946 figure to about 18,300,000. The demand is certainly there, he said, but he cautioned that there can be no assurance of raw material supply.

He said these factors threaten to curb production: (1) lack of woods able to replace war prisoners; (2) lack of incentive because of pulp price ceilings affecting U. S., Canadian and Scandinavian sources and (3) the usual Baltic freeze-up curtailing Swedish pulp shipments.

Oliver M. Porter, executive director of the U. S. Pulp Producers Association, agrees there is no assurance of enough pulp for a million-ton paper production increase in 1946, although paper mill capacity and consumer demand.

Pulp demand will exceed supply during the first six months of 1946, said Mr. Porter. He holds out the hope that this may ease only during the last six months of the year.

Paper production at the rate achieved in the last quarter of 1945 can be maintained, he said, only if the mills are willing to operate on "the pulp-starved furnish basis of the last two years of war." This would mean inferior quality, which is hardly what is expected in peace time.

The U. S. Department of Commerce has issued a prediction that U. S. paper and board production will amount to 18,000,000 tons in 1946 and that imports from Canada will exceed 3,000,000 tons, "with domestic U. S. requirements 25% high-

er than in any former peace time year.

The Census Bureau reported U. S. woodpulp consumption totaled 10,822,633 tons in 1945, compared with 10,502,204 tons in 1944 and 10,635,320 tons in 1943.

It reported wood pulp production in the U. S. alone as 10,164,868 tons in 1945 compared with 10,108,443 in 1944 and 9,680,462 in 1943.

Here are the hard facts of pulp supply as issued by U. S. Pulp Producers:

	ESTIMATES WOOD PULP SUPPLY		
	Last 6 Months of 1945	First 6 Months of 1946	
Imports from Canada	560,000	440,000	
Imports from Europe	625,000	360,000	
U. S. Production	4,940,000	4,800,000	
Total	6,125,000	5,600,000	
Pulp stocks on hand at U. S. mills	—250,000 tons on July 1, 1945, and		
	495,000 tons on Nov. 1, 1945.		

Opie Hayes Is Back In Office Regularly

E. J. "Opie" Hayes, office manager of the St. Regis Paper Co.'s Kraft Pulp Division in Tacoma, Wash., is in good health again and on the job regularly after suffering two sieges of illness from a heart ailment last year. He is also pleased to have his son, who was wounded in military service in Africa, at work in Tacoma.



CHARLES G. FRAMPTON, who has retired as Superintendent of Fernstrom Paper Mills, Pomona, Calif., but will continue to serve company in advisory capacity.
RICHARD S. BUCKLEY has been promoted to Superintendent.

Superintendents to Meet In Maine June 17-20

Poland Spring, Maine, has been chosen as the 1946 convention site for the national gathering of the American Pulp & Paper Mill Superintendents Association—and the dates are June 17 to 20.

Reservations may be mailed via the association headquarters at 220 East 42nd St., New York 17, and PULP & PAPER INDUSTRY was told there that present indications are that the attendance will break all records. Arrangement has been made with the Poland Spring management for all available space in Poland Spring House, Mansion House, Ricker Inn and Summit Spring Hotel. Blanket reservations for several rooms cannot be accepted, the association says, due to the popularity of the area in the month June. The hotel arrangements make it more feasible to arrange for parties of three or four than parties of one or two, and the association asks for the names of those with whom you would be willing to share such arrangements when making your own reservation.

Site of the 1946 meet had been a matter of conjecture for some weeks, and it was finally decided to return to the location of two previous conventions after considering problems of transportation, meeting space and hotel accommodations.

Wolf Appointed By State Governor

R. B. Wolf, manager, Pulp Div., Weyerhaeuser Timber Co., Longview, Wash., has been appointed to a board to be known as the Washington State Forest Products Institute, created and headed personally by Governor Wallgren of that state.

The purposes of the Institute is to encourage closer use of wood resources and development of needed wood products. Serving with the governor are nine leaders from industries, forest agencies and unions.

Charles Stehman Becomes Soundview Master Mechanic

Charles Stehman has been promoted to master mechanic at Soundview Pulp Co., Everett, Wash., it is announced by Leo S. Burdon, general manager.

Mr. Stehman succeeds John Moak, who has moved to West Linn, Ore., to take a position in connection with the construction work at the Crown Zellerbach mill there.

A long-time employee of Soundview, Mr. Stehman earned his appointment by regular promotions, his last position being that of head machinist.



BROWN COMPANY ANNOUNCES PLANS TO MAKE SULFATE PULP

New 196-inch towel machine being made by Rice, Barton and General Process Div. of GAT is supplying causticizers, digesters, evaporator.

Late in January, Frederic G. Coburn, president of Brown Co., announced in New York official word of the expansion program at the Berlin, N. H., mills.

Installation of a 196-inch paper machine, built by Rice, Barton, is included in the program. It will produce towels at 1200 feet per minute.

New sulfate pulp producing facilities are included in the new equipment. The General Process division of the General American Transportation Company is supplying the lime kiln, causticizers, digesters, blow tanks, and evaporator. Capacity of the new sulfate mill will be 60,000 tons annually.

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PEJEBCOT MILL TO MAKE NEWS; ALSO A NEW PRODUCER IN SOUTH

Two developments on the newsprint front last month promise to throw a slight brake, at least temporarily, on the trend away from newsprint production in the United States, which has been creating alarm among newspaper publishers. These are:

1. Determination of Southern publishers to have another two-machine newsprint mill, even if they have to buy stock in it.

2. Confirmation by PULP & PAPER INDUSTRY that the Pejebscot mill in Maine has been purchased by Hearst.

Pejebscot Paper Co., Brunswick, Maine, has been acquired by the Hearst Consolidated Corp., New York, it was announced to PULP & PAPER INDUSTRY on February 1 by Arthur Schroeder, president. Mr. Schroeder said that the mill was being acquired solely as a protection in requirements and that it would in no way interfere with present Hearst newsprint contracts.

Pejebscot has not made newsprint since 1940 being devoted to the manufacture of groundwood specialty papers since that time.

It will now be transferred back to newsprint, and is the first reversal of a strong recent trend of mills going from newsprint into book and magazine papers.

Mr. Schroeder said that he had indications from Hearst interests that there would be no change in management personnel.

Edgar S. Catlin is vice president and manager of manufacturing. Worthen E. Brawn is general superintendent and E. R. Comee, chief engineer. The mill's rated capacity for groundwood pulp is 90 tons daily. It has been making book, coating stock, catalog, tablet and other papers on three Fourdriniers of 87, 117 and 137 inch trim.

Plans in the South

Determination to push for construction of a two-machine newsprint mill for the southeast area to produce 100,000 tons annually was voiced by the Southern Newspaper Publishers Association at a meeting of directors held in Atlanta, Ga., on January 27.

The directors' expression came as confirmation of the newsprint committee report following its session under the chairmanship of Clarence B. Hanson, Jr., publisher of the

Birmingham (Ala.) News and Age-Herald. George C. Biggars, vice president and general manager of the Atlanta (Ga.) Journal is chairman of the newspaper men's board. Carl B. Short, Roanoke, Va., is president.

According to Walter C. Johnson, Chattanooga, Tenn., secretary-manager of SNPA, the newsprint project will cost between \$10,000,000 and \$15,000,000, may be located in Georgia, Alabama or Louisiana; and will be carried into completion by one of three groups now negotiating with the publishers. The newspaper interests, said Mr. Johnson, are ready to contract for the mill output for five years or more and to take stock.

The Southern Newspaper Publishers' Association members are encouraged in their work for a second newsprint mill by the success of the first mill built in Lufkin, Texas, under the name of the Southland Paper Mills, Inc., which is doubling its original capacity.

Winners in Tennis At Union Bag & Paper Corp.

A tennis tournament at Union Bag & Paper Corp., Savannah, Ga., was so successful it is going to be made an annual affair. Ernie Wynn, auditor, won the championship, and Dr. C. E. Hartford, recently promoted to manager of the pulp and paper division from general supt. and Dr. H. Y. Charbonnier, superintendent of the technical service, were runners-up.

BIG COAST MEETING AT GEARHART, ORE., MAY 16-19—RAY BARTON WILL ATTEND

One of the biggest regional meetings of the pulp and paper industry this year will be held at Gearhart, Ore., popular fishing and resort village on the Pacific Ocean highway, May 16-19.

This will be the annual Joint Spring Meeting of the Pacific Coast Division of the Superintendents Association and the Pacific Coast Section of TAPPI.

The meetings will be held on Fri. and Sat., May 17 and 18, with a get-together on the previous evening. Two resort hotels—the Gearhart Hotel and the Ocean House—are reserving all rooms for the affair and the golf course also will be reserved.

Ray Barton of Plainwell, Mich., the president of the American Pulp & Paper Mills Superintendents Association, will be an honored guest and quite a number of eastern equipment and supply company executives are expected.

Final plans for the meeting were approved at a meeting in Longview, Wash., Feb. 5, attended by Charles Ackley, of the Lebanon Crown Zellerbach mill, who is chairman of the Coast superintendents, and Harold Bialowsky, of the Everett Weyerhaeuser mill, chairman of the Coast TAPPI, and other officers of the two groups. Bob True and Fred Armbruster were the committee assigned to arrange the meeting.



GORDON SHERWOOD (left), Asst. to the President, Hawley Pulp & Paper Co., Oregon City, Ore., and THOMAS H. GRANT, new Sulfite Supt., Hawley Pulp & Paper Co.

Mr. Sherwood, graduate of U. of Utah, rose to Lieut. Commander in Navy Air Corps and directed a squadron aboard carrier Lexington during war, joined Hawley in December.

Mr. Grant, born in Dundee, Scotland, became a U. S. citizen in 1926. He held positions with Whalen Pulp & Paper Co., Port Alice, B. C.; Dunn Sulphite Paper Co., Port Huron, Mich.; Crown Wilamette at Lebanon, Ore., and Columbia River Paper Mills at Vancouver, Wash., before joining Hawley in 1944 as Technical Director.

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POST-WAR PICTURE FOR SOUTHERN PULPWOOD

Intensified practice of forestry on present and needed enlargements of mill owned lands is a "must" during the next decade to meet the needs of the expanding southern pulp and paper industry. Hand-in-hand with such a program, there must be accompanying work among independent pulpwood growers, and adoption of effective labor-saving mechanization where possible.

This was the sum-total of programmed addresses and discussions of the first post-war meeting of Southern Pulpwood Conservation Association, held in Atlanta Jan. 31-Feb. 1.

Speakers during the first day's sessions, in reviewing the organization's constructively effective work and its needed post-war revival, built-up to the evening's event in which the mills were somewhat bluntly advised to get every owned acre fully stocked, and to raise their sights of pulpwood supply to 75% from their lands instead of an outmoded 50% level prevailing before conditions changed.

This latter advice came from Capt. I. F. Eldredge, of New Orleans, who headed up the Southern Forest Survey prior to becoming a consulting forester upon retirement from U. S. Forest Service.

After declaring his thesis: "that in the not-so-distant future we are going to encounter real difficulty in supplying our Southern pulp mills with wood at acceptable cost and in dependable volume unless we set out now to enlarge and cultivate the supply through the application of intensive forestry," Capt. Eldredge pointed to increasing numbers of pulp mills and ever-present competition of the lumber industry for trees.

"That recent surveys . . . indicate a rapidly growing reduction of volume of saw-log size material . . . contains no promise that lumbermen in large numbers are going to pass out of the picture any time soon. To the contrary . . . these folks, and the pile and pole, railroad tie, veneer and naval stores people too, are learning to use smaller trees and are all going to stay in business just as long as markets hold up—and that looks like a long time indeed."

Capt. Eldredge foresees ahead an increasing sharp competition among

HENRY J. MALSBERGER, Atlanta, Ga., Gen. Mgr. of Southern Pulpwood Conservation Assn., had details worked out for smooth meeting.



forest product industries for trees and wonders if the pulpman of the future can pay as much for wood as a sawmiller can?

"We have seen average pulpwood stumpage prices go from 35c a cord up to as much as \$2.50 per cord, and even more, in the past 12 years. Can the industry operate profitably on \$5.00 stumpage? If it can, how rich will be the take of those lucky mills whose wood can be supplied wholly or mainly from their own forests at the mere cost of growing it—say \$1.50 per cord on the stump."

Reviewing the good results obtained from frequently undermanned forestry staffs, Capt. Eldredge doubts that any pulp company forest in the region has either a fully stocked stand or a fully forested area. "The time has come when it is both necessary and economically justified to spend real money and large sustained effort to make every acre a mill owns grow every stick it can support and grow it as fast as possible."

65c Labor Rates

In opening the sessions, President C. O. Brown (vice-president, International Paper Company) said it took WPB three years to discover that pulpwood is essential to pulp production, and only then did the southern industry receive the mechanical aid and publicity needed.

The Southern mills have had cheap labor in the past and as a result used little machinery, but facing minimum 65c per hour labor it must resort to mechanical aid to get pulpwood to the mill at a reasonable basis if it is to meet the competition of Canadian mills, of which three are already converting to kraft, he said.

While those phases of the Association's program involving man-

power use suffered, and cutting practices encountered difficulties from land owners wishing to cash-in on current high prices, the work of the organization was not entirely laid aside during the war, declared H. J. Malsberger, the organization's general manager. Promotion of fire control and general aspects of good forestry were continued without interruption. Other work was continued, including the boys' camps, seedling distribution, and others. A new angle of approach was an exhibit at the Summer School session of the South at Emory University.

Hutchins Surveys U. S. Resources

Southern mills should develop larger growth within short distances from the plant, according to Curtis M. Hutchins, president, Dead River Company, Bangor, Maine, and former head of WPB Pulpwood Production, who sees the South as an area of increasing importance within the industry. Reciting that Sweden is using wood for fuel and Russia has taken half of Finland's pulp timber, he went on to portray supply sources in the New England and Great Lakes States areas as receding from mill sites. In the West, stumpage is shortening and in five years 50% of the big sawmills will be out, with no room for new paper mills.

Progress in Great Lakes states, he reported, included large plantings which, however, is subject to a slower growing cycle.

Details of successful training classes for woods workers were given by Mr. Hutchins who said two men are employed for each 50 workers; teach them to sharpen saws, fell trees the best way, etc. It pays dividends, he said.

The New England states, he said, are sorry now they cut so hard, as the forest is not coming back so good; the South knows this lesson and should take advantage of it.

The Southern Association, said Frank Heyward, Jr., who was general manager until last year, when he became a "consulting forester" only to reappear with Gair Santee Corp., which is planning a Southeastern mill, stemmed from widespread fears in the South that the pulp mills would put all other forest industries out of business. The Association has always talked about "forest products" not just "pulp-



AT SOUTHERN PULPWOOD CONSERVATION ASSN. meeting in Atlanta:

Top row (left to right): C. O. BROWN, New York, Vice Pres. of International Paper Co., who, as 1945 President of Assn., presided at sessions; T. W. EARLE, Orangeburg, S. C., Vice Pres. of Gair-Santee Corp., who was promoted from Vice Pres. to President of Assn.; R. C. BRENT, St. Joe Paper Co., Port St. Joe, Fla.; J. J. (Jess) ARMSTRONG, Union Bag & Paper Corp., Savannah, and J. H. GRAHAM, West Virginia Pulp & Paper Co., Charleston, S. C.

Lower row (left to right): PAUL W. SCHOEM, Manager, Forest Farmers of America, Valdosta, Ga.; J. M. TINKER, Georgia State Forester, Atlanta; M. H. COLLETTI, West Virginia Pulp & Paper Co., New York; C. F. EVANS, Assistant (U.S.) Regional Forester, Atlanta, and W. E. SHEPPERD, Atlanta, Drott Mfg. Co., Milwaukee.

wood" and devoted its efforts to "the other fellows' land" and not worried about company land, concerning which it had no need to worry.

Mr. Heyward then laid down some admonitions to the industry, including the following:

Mills are financed by northern capital, and will be wise to operate on a program above criticism.

New-coming mills mean more drain and more real support for the Association's conservation program in wood procurement.

Don't dodge the cutting practice problem because the fire problem has not been licked.

The all-purpose forest will bring the greatest profit to the owner and manufacturer if the necessary markets are available, declared Charles F. Evans, assistant U. S. regional forester.

Difficulties in establishing sound cutting methods among farmer owners were detailed by R. W. Graeber,

North Carolina Farm Forester, who said there are three general classifications (1) owners who're "not gonna let" pulpmen or lumbermen on their land although their trees may be dying of old age; (2) those who want "every last cent now"; and (3) those trying to cut conservatively to maintain a stand. He "wondered" if there shouldn't be a higher price for good plywood and a secondary level for culs and thinnings.

J. H. Keener, wood procurement officer of Champion Paper & Fibre Company, Canton, N. C., talked "off the record" on that subject. Ensuing discussion was interesting, but not exciting.

There will be abundant timber for all plants if fire protection, re-planting and intelligent cutting practices are encouraged, said T. W. Earle, vice president, Gair Santee Corp. "There is more timber burned every year than all the plants in the South can use." Mr. Earle reported use of a machine for plant-

ing seedlings, saying his company used one in South Carolina last year. One man requires a day to plant 1000; the machine plants 1500 per hour.

The use of a circular, powered saw was seen by G. E. Knapp, Southern Pulpwood Corporation, Birmingham, and K. S. Trowbridge, American Pulpwood Association, as a prime factor in pulpwood mechanization. The saw reduces "back-breaking" work.

Other features of mechanization in the woods were discussed by J. H. Graham, West Virginia Pulp & Paper Co., Charleston, S. C.; M. H. Collett, also of the same company; and, by John Walker, of the Mack Truck Co.

T. W. Earle, vice president of Gair-Santee Corp., Orangeburg, S. C., was elected president to succeed C. O. Brown, of New York, vice president of International Paper Co. Karl Swenning, of Hollingsworth & Whitney, succeeded Mr. Earle in the

vice-presidency. Other members of the executive committee will include W. J. Dantloft (Champion Paper & Fibre), Ed Gaynor (Brunswick Pulp & Paper), and Maj. J. H. Friend (Int. Paper Co.).

Members of the organization include: Brunswick P. & P., Champion, Gulf States, National Container, Camp Manufacturing, Container Corp., Southland Paper Mills, West Virginia P. & P., Florida P. & P., North Carolina Pulp Co., Glatfelter Pulp Wood Co., International Paper, Union Bag, St. Joe Paper, Hollingsworth & Whitney, Riegel Paper Corp., and Gair-Santee Corp.

Attending the meeting were:

R. J. Freshwater, Vertrees Young, L. J. Risch, and J. H. Foil, Gaylord Container Corp., Bogalusa, La.; J. J. Armstrong, William Ernst, Union Bag & Paper, Savannah; G. B. Curry, E. K. Ash, North Carolina Pulpwood Co., Plymouth, N. C.; J. B. Johnson, Camp Manufacturing Co., Franklin, Va.; Jack Falck, International Paper, Panama City, Fla.

T. W. Earle, Orangeburg, S. C., and Frank Heyward, Savannah, Ga., both of Gair-Santee Corp.; R. C. Brent, St. Joe Paper Co., Port St. Joe, Fla.; Curtis M. Hutchins, Dead River Company, Bangor, Me.; Bruce M. Bebensee, The Flintkote Co., Meridian, Miss.; J. M. McClurd, Brunswick Pulp & Paper Co., Brunswick, Ga.

J. H. Graham, Charleston, S. C., and M. H. Collett, New York, West Virginia Pulp & Paper Co.; L. P. Anders, Gulf States Pulp & Paper, Tuscaloosa, Ala.; George L. Snowdon, Mead Corp., Chillicothe, O.; C. O. Brown, New York, International Paper Co.; X. Weston, Hollingsworth & Whitney, Mobile; O. O. Koski, Minnesota & Ontario Paper Co., International Falls, Minn.

Nat D. Canterbury, Champion Paper & Fibre Co., Houston, Texas; Thomas W. Alexander, W. J. Dantloft, J. H. Keener, W. B. Huger, Champion Paper & Fibre Co., Canton, N. C.; Ed Hall, Container Corp., Fernandina, Fla.; J. M. Tinker, Atlanta, Ga., State Forester; R. W. Graeber, North Carolina State College, Raleigh, N. C.; D. J. Weddell, University of Georgia.

Paul W. Schoen, Forest Farmers Assn., Valdosta, Ga.; Robert N. Hoskins, Seaboard Airline Railway, Norfolk, Va.; Ed Knapp, Southern Pulpwood Corp., Atlanta; J. F. Spiers, Central of Georgia Ry., Savannah; Warren T. White, Seaboard Airline, Norfolk; K. S. Trowbridge, N. E. Brinckerhoff, American Pulpwood Assn., New York; C. A. Gillett, American Forest Products Industries, Washington, D. C.

I. F. Eldredge, Consulting Forester, New Orleans; Charles F. Evans, U. S. Forest Service, Atlanta; C. R. Lockard, U. S. Forest Service, New Orleans; E. T. Hawes, U. S. Forest Service, Atlanta; George K. Stephenson, U. S. Forest Experiment Station, Athens, Ga.; C. H.

Niederhof, Westvaco Experiment Station, Georgetown, S. C.; T. O. Galloway, Soil Conservation Service, Atlanta.

Cal Colby, The Oliver Corporation, Bloomfield, N. J.; Joe R. Gramlin, Fla.-Ga Tractor Co., Tallahassee, Fla.; J. Hubert Gelston, Henry Disston & Sons, Inc., Philadelphia, Pa.; J. K. Villensvik, New York, J. H. Touchstone, Laurel, Miss., and Ralph B. Elliott, Soddy, Tenn., all of Sandvik Saw & Tool Co., New York.

Claude M. Evitt, Allis-Chalmers, Milwaukee, Wisc.; John Walker, New York, and Jack Heneberg, Charlotte, N. C., both Mack Truck Co.; Gene Bechard, Atlanta; James E. Penton, E. C. Atkins Co., Memphis; J. N. Felton and L. D. Montague, B. L. Montague Company, Sumter, S. C.

F. Frantz and John W. Drott, of Milwaukee, and W. E. Shepperd, Atlanta, all Drott Manufacturing Co.; W. T. McGlathery, W. E. Richardson Machine Co., Atlanta; John H. Wright, Bethbeze Spring Service, Mobile; J. R. Clark, Rite Equipment Co., Mobile; Roy White and Al Ingram, Blalock Machinery Co., Atlanta; W. P. Harding, Jr., Tri-State, Inc., Atlanta; Joe H. Brady, Mall Tool Co., Atlanta; J. A. Murphy, J. S. Case Co., Atlanta; M. J. Monson, Link-Belt Co., Atlanta.

Bruce Boyer and G. W. Russell, Caterpillar Tractor, Peoria, Ill.; Steve A. Batorson, H. G. LeTourneau, Inc., Peoria; L. E. Byrd, B&C Equipment Co., Jacksonville, Fla.; A. A. Kucken, Thornton Tandem, Detroit, Mich.; Harry D. Fruehauff, Tool Engineering Service, Birmingham; Harry Lowther, Chicago; Fred W. Felkel, Anderson, S. C.; and J. F. Stanford.

Southern Kraft Starts Construction Of South's First Hardwood Pulp Mill

Construction work is underway at the Georgetown, S. C., mill of Southern Kraft Division, International Paper Co., on a hardwood pulping installation for production of an inner layer or corrugated rib for boxes. The new pulp mill will feed to one of the presently installed Beloit Fourdrinier machines.

This is the first mill of the type—operating exclusively on hardwoods—in the South, and marks another important development in utilization of its forests.

The experimental and pilot plant work on the hardwood product was effected at the Bastrop (La.) mill of the Southern Kraft Division. Turned out at that plant, the new product has been marketed under the name of "Chemfibre" and its success paved the way to the larger operation.

The Georgetown mill is equipped with one 200-inch trim and two 196-inch trim Beloit Fourdriniers. It is credited with a capacity of 1435 tons of pulp each 24 hours, utilizing about 2,000 cords of wood.

Necessary modifications to one of the machines will be effected for the

production of the hardwood layer material.

The new pulp mill will cost an estimated \$2,000,000 and be completed in September. Its construction is under supervision of IP engineers, with Arthur Perkins as chief engineer. C. A. Thompson is in charge of construction. B. B. McCormick and Sons, Jacksonville, Fla., contractors, are doing the dirt moving, pile driving, concrete pouring, etc.

Construction work will require approximately 400 persons, for the accommodation of which the floating hotel Amphitrite has been brought to Georgetown. With a hull originally that of a U. S. gunboat, the Amphitrite was converted to a hotel at Charleston, S. C.

The new pulp mill is to be ready for September.

In addition to the new installation, the Southern Kraft Division is proceeding with replacement of worn or obsolescent machinery, the program for which had been held up by the war. Barking drums at Camden (Ark.), Bastrop (La.), Moss Point (Miss.) and Panama City (Fla.) are being replaced, but with larger sizes for greater efficiency. A new drum

for hardwood is being installed at Georgetown. Hardwood is more difficult to bark than is pine.

The replacement units are FMP chain suspended U-Bar barking and washing drums of Fibre Making Processes, Inc.

At Mobile, where the mill is rated as 460-ton-per-day pulp capacity, the installation of replacement equipment will result in stepping up the production by 75 tons per day. The outlay at Mobile will involve \$1,050,000.

The improvements will include a new 7500 KW General Electric turbo-generator, originally ordered in 1941. Also included a Babcock & Wilcox black liquor recovery boiler system. Steam line capacity will be increased and the four paper machines will be modernized.

The testing and research laboratory will be enlarged.

Jim Allen Owns Baseball Team

James H. Allen, president and general manager of the Florida Pulp & Paper Co., Pensacola, Fla., enjoys the hobby of being the owner of the "Pensacola Fliers" baseball club. The club is in the Southeastern League.

UTILIZATION OF WOOD WASTE IS SUBJECT OF PANEL DISCUSSION

Crown Zellerbach, Soundview, Comox and St. Helens re-logging methods discussed. Wallboard prospects extolled. Chemical products of West Virginia P. & P. Co., Marathon Corp., Madison lab and western universities are evaluated.

"Where is our future pulp-wood supply?" — that question is uppermost in the minds of everyone connected with the pulp and paper industry who is concerned with making intelligent plans for his own or his company's future.

Technical and research men and women are no less concerned than others. In fact, they are so concerned that they wanted to discuss the subject at their meetings on the Pacific Coast this year. And so, two meetings of the Pacific Coast TAPPI section — the largest TAPPI group in the U. S. — were devoted to the subject.

A record group turned out for a meeting in Longview, Wash., Feb. 5, to discuss "Utilization of Wood Waste" — attacking the subject from every conceivable angle under the efficient direction of Dean Paul M. Dunn, of the forestry school, Oregon State College.

In logical sequence, the next meeting on Tuesday, April 2, at Bellingham, Wash., will work over the subject "Timber Management" with Ed Heacox, forester, Weyerhaeuser Timber Co., as moderator. As was the case at Longview, this will be a panel or round table discussion, with various specialists or experts on the panel, and the meeting will be in the afternoon, from 2 to 5:15 p. m., with dinner and entertainment to follow.

Shibley Contest Paper

At each of the 1945-6 meetings, a paper also is being presented for entry in the Shibley award contest, open to mill operations employees on the Pacific Coast. The one given at Longview was a discussion of viscosity control in production of bleached pulp, by Oliver P. Morgan of the technical department, Longview mill, pulp division, Weyerhaeuser Timber Co. (See Page 56).

Mr. Morgan discussed how samples were taken and records maintained. He explained that his mill used the cupriethylene diamine solvent developed for this purpose at Ecusta Paper Corp., Pisgah Forest, N. C., but under a different technique, which Research Director Ray Hatch of the Weyerhaeuser pulp di-



HERE'S THE PANEL THAT ATTACKED wood waste subject from every angle at Longview TAPPI meeting Oct. 5 (left to right): DR. BROR GRONDAL, College of Forestry, University of Washington; DR. ARTHUR B. ANDERSON, Chemist, Western Pine Association, Portland, Ore.; DEAN PAUL M. DUNN, Forestry School, Oregon State College (the Moderator); CLARENCE W. RICHEN, Forestry Dept., Crown Zellerbach Corp., Portland; and GLENN VOORHIES, Wood Products Co., Portland.

vision had devised. The Ecusta technique employed a capillary viscosimeter but Dr. Hatch adopted a falling ball viscosimeter. (Papers by the Ecusta research men were published in the Sept. 1944 PULP & PAPER INDUSTRY and by Dr. Hatch in the October, 1944, issue).

Mr. Morgan stressed the dependability of the method. He suggested it might also be useful in unbleached pulp and in production of paper grade pulps, where "otherwise unexplainable strength changes may be explicable."

Dean Dunn Sets the Stage

Dean Dunn began the panel discussion on wood waste by stressing its importance not only to the Pacific Northwest but to the entire nation. He said "best information indicates roughly 35% of the tree is used, leaving about 65% unused," in western forest industries as a whole. In Europe and some sections of the U. S., he said, from 50% to as much as 70% utilization has been accomplished.

"It seems very apparent to most of us that increases in industrial phases of this forest business or even maintenance of current enterprises must be associated with both more complete utilization and the introduction of new products," he said. "Added income to the forest

businesses will be reflected in terms of new payrolls, increased protection and better forest practices. Also, an increase in the proportion of the material used will tend to offset any decreases in volumes that may come as a result of sustained yield programs."

Dean Dunn predicted that the law of supply and demand will "encourage" greater utilization, but he urged industries to "get ahead of the game." He said many sawmills, plywood plants and pulp and paper mills already were using more rough material, that western pine mills, especially, were turning out products from formerly unused wood, that re-logging and even pre-logging (logging small wood after, or before, big timber) "have come to be facts, rather than just dreams."

Dr. Grondal Reviews

Prof. Bror L. Grondal, of the college of forestry, University of Washington, appearing for the third time in recent years before this TAPPI section, reviewed past surveys of the amount of wood left as slash in the logging areas, discussed the trend during the war and some methods of cleaning up the material. (The February 1942 issue of PULP & PAPER INDUSTRY contained an article by Dr. Grondal evaluat-

A SUGGESTION FOR TAPPI SECTIONS; NEW COAST PLAN DRAWS RECORD TURNOUT

Here's a tip to other TAPPI sections in the U. S. and the Canadian Association's Technical Section, too—

The Pacific Coast Section's decision to hold technical discussions at afternoon meetings this year—before, instead of after, the customary dinner—is credited with being the most significant and successful change the group ever made.

Despite a day-long downpour of rain and the fact that many stayed home because of inability to get hotel rooms, the afternoon-and-evening program at Longview, Wash., Feb. 5, brought an all-time record-breaking attendance for the big-monthly meetings—a total of 163 persons paid \$2 for admittance to the meeting and a ham-and-mash dinner at the Longview Country Club.

Most TAPPI members on the coast are saying that afternoon-and-evening program makes the trips worth while. More serious attention and interest are given to subjects in the afternoon sessions. The evenings are devoted to a speaker from outside the organization and to entertainment and the renewing of friendships.

This plan is working so well that it's almost certain the Coast group never again will go back to evenings-only meetings.

Like the Lake States Section of TAPPI, the Pacific Coast group has likewise found that a panel or round table discussion on a single important subject at each meeting is proving much more interesting than highly specialized and disconnected talks or papers.

A lot of credit for the really big year of rejuvenation that the Coast Section is now enjoying is due to a "missionary" job done by William R. Barber, director of the Central Technical Dept., Crown Zellerbach Corp., who is the Coast member of TAPPI's national executive committee.



Left to right: GEORGE W. GLEESON, Dean of Engineering, Oregon State College, who made after-dinner speech urging that liberal arts students and public in general be taught significance of tremendous technological advances; DR. LEO FRIEDMAN, also of Oregon State College, who introduced Mr. Gleeson; and SVARRE E. HAZELQUIST, Tech. Director, Longview pulp mill, Weyerhaeuser Timber Co., who was in charge of arrangements. Mr. Hazelquist was assisted by a trio from his mill—KEN LARKIN, Personnel Supervisor, and HAROLD HOFF and LYLE JONES, both of Technical Dept.

ing wood left on 20 small logging areas).

Utilization standards improved during the war, he said, with many logs formerly considered unmerchantable being used. But as offsetting factors he cited higher wage scales and machinery costs, which tended to discourage clean logging. In reviewing actual surveys of plots, he enumerated large quantities of wood suitable for lumber, poles, pulp or insulating board which were left in the forests.

He mentioned a waste reduction machine mounted on a donkey sled, developed by himself and E. T. Clark (PULP & PAPER INDUSTRY, October 1943 issue), which could be taken into logging areas to break down material left on the ground.

"No one has yet attempted to build or operate such a devise, al-

though the vertical edger ahead of the saw has been placed in successful operation in a sawmill," he said.

He believed the most practical uses of waste would be for fuel, pulp and possibly, the production of "a condensation product" from partially decayed logs by "pyrolysis or destructive distillation."

Small wood may be bundled and brought into mills at moderate cost, he thought, but on many plots the bulk of logs were quite large. In such areas, he proposed splitting the logs with explosives.

"Any methods used to get larger logs and larger debris off the ground will lower costs of cleaning up small wood, reduce fire hazard and improve the site for regeneration," he said.

Crown Zellerbach Re-Logging

Clarence W. Richen, forestry

PULP & PAPER INDUSTRY

department, Crown Zellerbach Corp., Portland, Ore., then discussed "Some Problems in Re-Logging Cutover Lands" (Page 58). His company has been "clean logging" since 1944 and he gave facts and figures on the results in two areas in Oregon. In a hemlock area, pre-war logging waste amounted to 15-18 cords per acre—an average of 85 pieces per acre of 6-26 inches diameter and 8-56 feet in length. Average diameter of waste was 11 inches. Most of this is now being recovered, at some increase in cost.

In order to fairly recompense fallers and buckers, a cubic foot measure is substituted for board foot measure as the basis of pay.

Stacked trucks which can carry 30-35 small logs are used. These loads are weighed, instead of being scaled in the conventional way. Because many small sapwood logs were "sinkers," the small wood is tied into bundles with wire before being lowered into the water and the bundles are made up into rafts. This almost doubles rafting and towing capacity, said Mr. Richen.

About eight useable cords per acre, too small or odd-sized to handle, are still left on the ground, according to Mr. Richen, who said: "This has brought home to us the need of specialized yarding and loading equipment to do a really clean job."

He said a 60-foot steel tower mounted on a tractor is being used by Crown Zellerbach Corp. The tower is hinged so it can be lowered for moving and the landings can be changed in one hour. This contrasts with the orthodox time-consuming system on the Pacific Coast of raising a spar tree and rigging it for yarding. In reply to questions, Mr. Richen said the Crown Zellerbach portable tower could yard over 450 feet. Another tractor with an 11-foot boom is used to cold-deck the logs.

Mr. Richen noted that Soundview Pulp Co. is using a 40-foot steel tube set on wheels. The main line and haulback lead from the power unit through the tube. He said Soundview plans to increase its yarding distance with a portable 60-foot spar.

"Their plan is to cold-deck logs in tree lengths at the landing where they are to be bucked in 8-foot lengths and packaged in one-cord bundles," said Richen. "I am told on a 65-acre experimental area, their recovery was about 60 cords per acre."

He also mentioned the "Ladysmith experiment" of Comox Timber & Railway Co., re-logging small wood



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for use by Powell River Co., which was described in several articles in *PULP & PAPER INDUSTRY* in 1944. Here a cherry picker, with a 28-foot A-frame on a light truck, is used. Comox has bundled random or 8-foot lengths and plans to pile and load 32-inch bolts on trucks or scows with clam-shell hoists.

Diversity of species, grades and sizes has made clean logging difficult in some Crown Zellerbach stands. The company got re-logging under way quickly in these stands, Mr. Richen said, by weighing each truck load in a Fairbanks-Morse scale and paying contractors a fixed rate per ton for the entire falling-to-hauling job.

Sorting of sawlogs may be done at the landing but pulp species will have to be done at the dump or mill, he said.

"In handling waste from their re-logging, St. Helens Pulp & Paper Co., has obtained good grade recoveries by careful inspection, trimming and sorting of peeler and sawlog qualities in the pond," said Mr. Richen. He predicted divorce of loading and yarding and use of truck-mounted loaders will improve selection of material.

Four things needed to encourage re-logging, he said, are a realistic measurement, specialized equipment, knowledge of waste values and better sorting facilities.

During a question period, he commented that a lot of small mill men are eager to establish portable mills in slash-burned areas to make cants of charred but small logs. Crown Zellerbach has been getting about 48 pounds of wood to a cubic foot of the small stuff, much of it without bark.

Mechanical Use of Mill Waste

Waste in the mills, as differentiated from that in the forests, was the next topic and the speaker was Glenn Voorhies of Wood Products Co., Portland. He also discussed mechanical uses of this waste.

"Ingenious applications to utilize and lessen waste have not been displayed in the timber industries as in the oil and chemical industries," he said, but pointed out that costs must be taken into consideration. For instance, a rural sawmill might find it cheaper to burn waste wood and buy power.

Mismanufacture, grade fall down and wasted manpower, he said, are forms of waste which should be "the first order of business in the timber industry before worrying too much about conversion of slab, edgings and sawdust."

Mr. Voorhies said "gross waste"—

Alcohol Plant To Be Completed

The Alcohol-From-Sawdust Plant at Springfield, Ore., will be completed with federal funds.

Construction Finance Corp. directors approved an additional advance of \$450,000 to complete the \$2,000,000 plant.

At war's end, work on the nearly completed plant, in the heart of a dense sawmill area, was ordered to cease. Considerable controversy raged before final decision to complete the plant was reached.

portion of log not used in primary product—in the average Douglas fir sawmill is 23% bark, 42% sawdust and shavings and 35% slabs, edgings and trim.

"By far the greatest volume of mill waste, except waste liquor, is used for fuel," he said. "The Swedes have made some progress in both firing and efficiency of wood burners. An attempt should be made to improve on these designs in order to maintain a wood fuel demand."

He said "scavenging" of slabs, edgings and trim for furniture parts, handles, lath and small stock can be very profitable, and cited some ingenious machines developed for this purpose. Development of resins and high frequency heating enhances these possibilities.

But the most promising mechanical use of this mill waste, he opined, is "a volume market for sheet building materials such as plywood, Masonite, Fir-Tex and a score of similar materials."

He suggested three steps for mill waste use: (1) extraction of gums, resins, oils, tannins, etc.; (2) fibrillating and hydrating of the mechanical fibers by Dr. Grondal's steam attrition grinder or a defiberizer or any other method; and (3) incorporation of low cost ingredients to help stabilize the final product, felt, and drying and compressing into sheets or curved or angular products.

"Thus the extractives, the hemicellulose, the cellulose and the lignin will all be used fully and we hope without undue cost," he concluded.

Chemical Utilization

Final speaker on the panel was Dr. Arthur B. Anderson, chemist, Western Pine Assn., Portland, who discussed "Chemical Utilization."

He said pilot plant experiments are being conducted at Oregon State College and the University of Washington on new and cheaper methods of charcoal production.

About 500 million feet of wallboard and pressed board are being

produced annually in the U. S. He said new plants of this type are contemplated in the west, with prospect of an excellent outlet for their waste wood.

He mentioned mild hydrolysis of wood for molding purposes, the Staypak or pressed wood developed at the Madison, Wis., laboratory, presto-logs and wood flour, and oxalic acid as other products.

Pointing out that the Springfield, Ore., alcohol plant will require 200 tons of dry wood waste daily to produce 10,000 gallons, he said there are only four or five locations where sufficient wood waste might be obtained for this purpose. On the other hand, he said, the manufacture of feeding yeast for cattle feed would require as little as 20 tons of waste wood daily and the product is in demand in the west, especially.

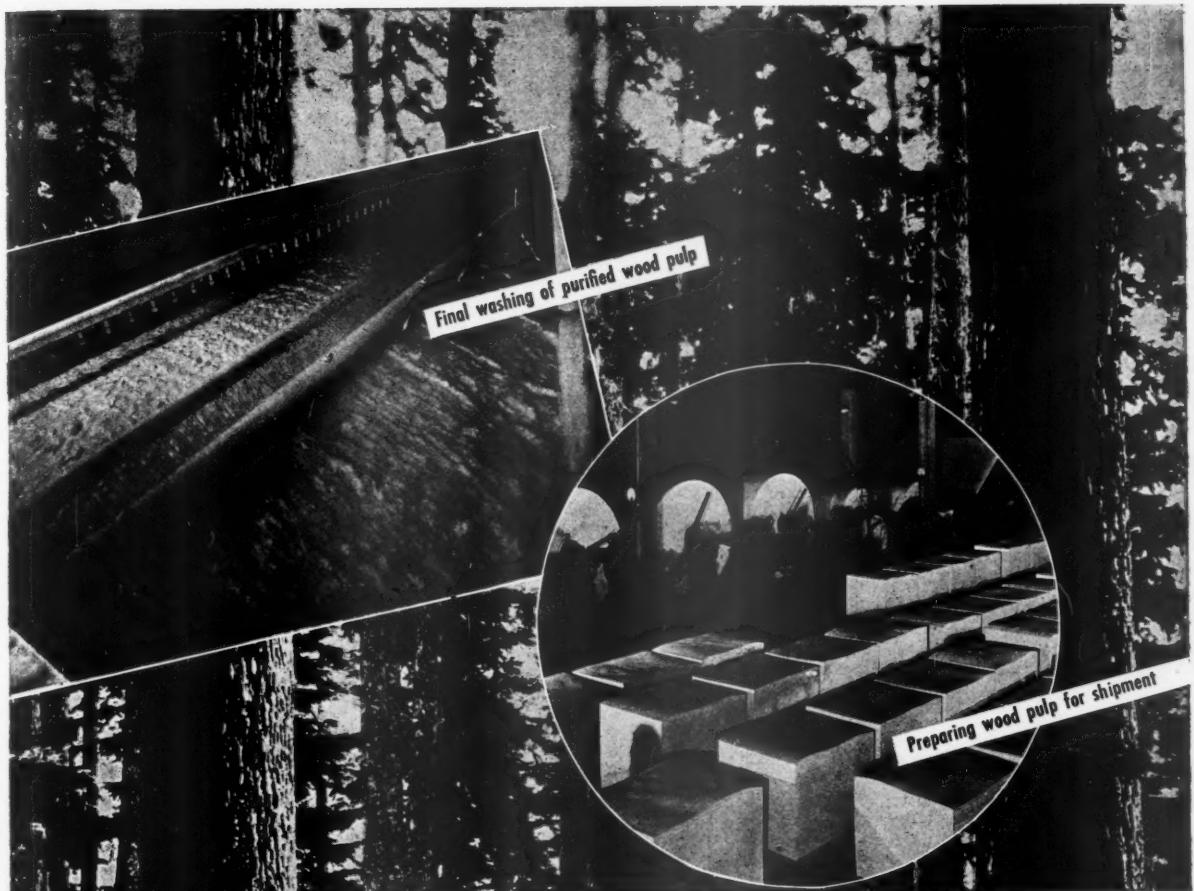
A wood molasses might be made for feeding with grain, but he questioned whether it could compete with present molasses prices.

Turning to lignin, he mentioned the plastic products, vanillin, tanning agent, cement dispersing agent and water softener made at the chemical plant of the Marathon Corp. of Rothschild, Wis.

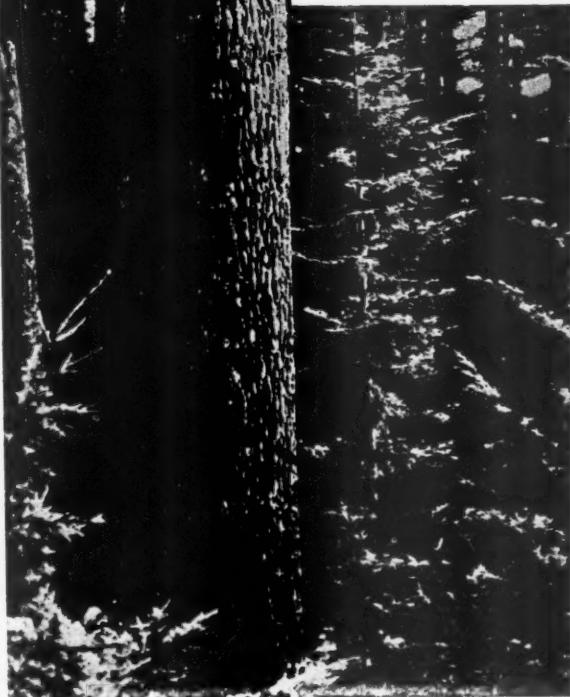
"The West Virginia Pulp & Paper Co. also is producing a lignin product called Indulin from sulfate waste liquor," said Dr. Anderson. "The lignin is dissolved during the processing of wood chips with sodium hydroxide and sodium sulfide and is precipitated from resulting black liquor by addition of acids. The resulting product is a brown, free flowing, amorphous powder of small particle size. It is useful in making plywood adhesives, absorbents for gases and decolorizing aqueous solutions, battery plate extenders, briquet binder, cement dispersing agent, corrosion inhibitor for boiler tubes, drilling muds to increase viscosity, emulsion stabilizer for asphalt, removal of iron from water, filler for plastics, resins, tanning materials, and water-softener by ion-exchange."

He mentioned work done at Madison on hydrogenation of lignin to form phenols, creosols and heavy oils.

The hemicellulose in wood waste has been neglected, he said, but could be used to make furfural, which was in such demand in the synthetic rubber industry that the government built a furfural producing plant in Memphis. Furfural has so many uses as a selective solvent or parent product, that Dr. Anderson thought it could be a lucrative



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by-product incidental to pulp manufacture, or alcohol, yeast, molasses and ligno-cellulose manufacture.

Use of pentoses for growing high protein feed yeast, he said, is being investigated at Oregon State College.

In discussing possible extractives, he, of course, discussed the extensive wood naval stores industry of the South and the production of tall oil from partly evaporated sulfate black liquor for use in soap, petroleum and paper industries, in textile processing and mineral flotation. He also mentioned other extractives such as tannin.

Dean Gleeson Discusses Technology

At the dinner at the Longview Country Club in the evening, Harold Bialowsky, chairman of the section, presided, and the principal speaker was George W. Gleeson, dean of engineering, Oregon State College, who discussed "Technological Responsibility."

He stressed the increasing momentum of technological development, climaxed by the discovery of the atom bomb. This, he said, is making it increasingly more urgent that engineers and scientists "accept some responsibility economically and politically."

"Those fields are qualitative whereas the field of the engineer and the scientist is quantitative," he said. "But the rest of the people must be brought to understand the quantitative aspects of technology. The American way of life has become a technological civilization."

Attendance at the Meeting:

C. E. Ackley, Crown Zellerbach Corp., Lebanon, Ore.; Fred E. Alsop, Hall Mount Co.; Arthur B. Anderson, Western Pine Association; C. A. Anderson, Crown Zellerbach Corp., Camas, Wash.; Leslie L. Anderson, Weyerhaeuser Timber Co., Longview, Wash.; L. W. Bailey, Weyerhaeuser Timber Co., Longview; W. R. Barber, Central Technical Dept., Crown Zellerbach Corp.; Laymon Bastian, Crown Zellerbach Paper Corp., Camas; C. T. Beals, Crown Zellerbach Corp., Camas; Geo. H. Beisse, Weyerhaeuser Timber Co., Longview.

H. W. Bialowsky, Weyerhaeuser Timber Co., Everett, Wash.; R. B. Black, Reichhold Chemicals Inc.; J. J. Bogner, Interlake Chemical Corp.; P. W. Brackett, Longview Fibre Co.; R. A. Bremner, Electric Steel Foundry Co.; James B. Brown, Crown Zellerbach Corp., Camas; A. M. Buck, Weyerhaeuser Timber Co., Everett; R. A. Butler, Crown Zellerbach Corp., Camas; Chas. L. Carns, Weyerhaeuser Timber Co., Longview; J. G. Carson, Longview Fibre Co.; R. E. Chase, R. E. Chase & Co.; A. L. Cheney, Rayonier Incorporated, Shelton, Wash.; Charles K. Clark, Weyerhaeuser Timber Co., Longview; W. M. Cline, General Chemical Co.; Frederick Covell, Crown Zellerbach Corp., Camas.

J. V. B. Cox, Hercules Powder Co.;

R. R. Cox, Walworth Co.; W. W. Clarke, Longview Fibre Co.; Leslie Darr, Longview Fibre Co.; Henry W. Dauterman, Longview Fibre Co.; J. Bayard DesCamp, Rayonier Incorporated, Shelton; Lionel E. Dowd, Development Lab., Weyerhaeuser Timber Co., Longview; R. E. Drane, St. Helens Pulp & Paper Co.; Paul M. Dunn, Oregon State College; George E. Durkee, Rayonier Incorporated, Shelton; M. L. Edwards, Weyerhaeuser Timber Co., Longview; C. A. Enghouse, Crown Zellerbach Corp., West Linn, Ore.; A. E. Erickson, Weyerhaeuser Timber Co., Longview; H. O. Ervin, Oregon Forest Products Laboratory; E. E. Escher, Longview Fibre Co.; A. K. Esteter, Weyerhaeuser Timber Co., Longview.

Carl Fahlstrom, Longview Fibre Co.; W. L. Failing, Fir-Tex Insulating Board Co.; Chester A. Fee, Pulp & Paper Industry, Portland; D. G. Felthous, Weyerhaeuser Timber Co., Longview; F. W. Flynn, Crown Zellerbach Corp., Camas; Leo Friedman, Oregon State College; Dave Fulton, Westinghouse Electric Corp.; John M. Fulton, Pacific Coast Supply Co.; G. H. Gallaway, Crown Zellerbach Corp., Camas; J. E. Garrison, American Cyanamid Corp.; G. W. Gleeson, Oregon State College; James K. Gould, Longview Fibre Co.; Alfred Graef, Weyerhaeuser Timber Co., Everett; Russell Graff, Longview Fibre Co.; Richard F. Graham, Weyerhaeuser Timber Co., Longview; John B. Grantham, Oregon State College; A. S. Gregory, Development Lab., Weyerhaeuser Timber Co., Longview; Bror Grondal, University of Washington; R. N. Hammond, Weyerhaeuser Timber Co., Longview; George A. Hansen, Weyerhaeuser Timber Co., Longview; John F. Hart, Longview Fibre Co.; L. R. Hartman, Weyerhaeuser Timber Co., Everett; R. S. Hatch, Weyerhaeuser Timber Co., Longview; H. A. Hauff, Weyerhaeuser Timber Co., Longview; Jan Haugeron, Crown Zellerbach Corp., West Linn; W. H. Haverman, Weyerhaeuser Timber Co., Longview; S. E. Hazelquist, Weyerhaeuser Timber Co., Longview; E. F. Heacock, Weyerhaeuser Timber Co., Longview; R. M. Hendry, Tacoma Plumbing Supply Co.; T. E. Hennestall, Long Bell Lumber Co.; H. R. Heuer, Weyerhaeuser Timber Co., Longview; T. S. Hodges, Reichhold Chemicals Inc.; C. F. Holcomb, Thos. A. Edison Inc., Storage Battery Div.; W. F. Holzer, Central Technical Dept., Crown Zellerbach Corp.

James H. Hull, Crown Zellerbach Corp., Camas; W. C. Jacoby, Crown Zellerbach Corp., Camas; V. J. Jansen, Longview Fibre Co.; J. E. Jeffery, Rayonier Incorporated, Shelton; Loyal Jones, Weyerhaeuser Timber Co., Longview; M. C. Kaphingst, Columbia River Paper Mills, Vancouver, Wash.; James W. Kelley, Longview Fibre Co., Longview; W. N. Kelly, Weyerhaeuser Timber Co., Longview; B. L. Kerns, Westinghouse Electric Corp., Seattle; G. D. King, Central Technical Dept., Crown Zellerbach Corp.; J. W. Klein, Longview Fibre Co., Longview; Don Knapp, Crown Zellerbach Corp., Camas; E. F. Kurth, Oregon State College; Harold Lange, L. H. Butcher Co.; K. H. Larkin, Weyerhaeuser Timber Co., Longview; Carl F. Leitz, Longview Fibre Co.; John LeTourneau, Crown Zellerbach Corp., Camas; Gus Lorenz, Crown Zellerbach Corp., Camas; Edwin L. Lovell, Rayonier Incorporated, Shelton; F. P. Marien, Weyerhaeuser Timber Co., Longview; Wm. W. Marteny, Central Technical Dept., Crown Zellerbach Corp.; S. J. Maunus, Longview Fibre Co.; J. L. Mc-

Carthy, University of Washington; W. W. McCarthy, Development Lab., Weyerhaeuser Timber Co., Longview; L. D. McClothlin, Crown Zellerbach Corp., Camas; Loyd McDonald, Longview Fibre Co.; John J. McNair, Weyerhaeuser Timber Co., Longview; John G. Meiler, Plywood Research Foundation; Otto F. Michaelis, Crown Zellerbach Corp., Camas; George E. Miller, Columbia River Paper Mills.

R. G. Mispley, Central Technical Dept., Crown Zellerbach Corp.; O. P. Morgan, Weyerhaeuser Timber Co., Longview; George O. Nelson, Crown Zellerbach Corp., Camas; Art Newcomb, Crown Zellerbach Corp., Camas; Elm Nixon, Longview Fibre Co.; M. E. Norwood, St. Helens Pulp & Paper Co.; George Nott, Crown Zellerbach Corp., Camas; E. H. Nunn, Crown Zellerbach Corp., West Linn; Max R. Oberdorfer, St. Helens Pulp & Paper Co.; J. H. Pestalozzi, Allis Chalmers Mfg. Co.; Virgil V. Peters, Longview Fibre Co.; H. T. Peterson, Weyerhaeuser Timber Co., Longview; Wm. Pittam, Weyerhaeuser Timber Co., Longview; J. C. Plankinton, Crown Zellerbach Corp., Camas; Phimister B. Proctor, Oregon State College; C. G. Reynolds, Coos Bay Pulp Corp., Empire, Ore.; C. W. Richen, Crown Zellerbach Corp., Portland; Robt. W. Riley, Crown Zellerbach Corp., West Linn; J. E. Robinson, Fir-Tex Insulating Board Co.; J. V. Savage, Crown Zellerbach Corp., Camas; Fred L. Schmidt, Crown Zellerbach Corp., Camas; Leon Semke, Crown Zellerbach Corp., Camas; Roy Shaneman, Pennsylvania Salt Mfg. Co. of Wash.; W. J. Shelton, Longview Fibre Co.; Brian L. Shera, Pennsylvania Salt Mfg. Co. of Wash.; D. L. Shinn, Crown Zellerbach Corp., Camas; D. L. Shirley, Electric Steel Foundry Co.; A. P. Siebers, Longview Fibre Co.

Ray Smythe, Rice Barton Corp.; R. A. Snyder; J. B. Sutherland, General Chemical Co.; V. M. Sutherland, Longview Fibre Co.; Paul J. Thiess, Monarch Forge & Machine Works; R. M. True, General Dyestuff Corp.; Guy E. Uhlig, Longview Fibre Co.; W. G. VanBeckum, Development Dept., Weyerhaeuser Timber Co., Longview; R. O. Vognild, Hooker Electrochemical Co.; Glenn Voorhies, Wood Products Co.; H. Jay Wagner, Weyerhaeuser Timber Co., Longview; R. H. Wagner, Longview Fibre Co.; Harold C. Wall, Longview Fibre Co.; C. L. Walton, Weyerhaeuser Timber Co., Longview; J. B. Ward, Hooker Electrochemical Co.

Ruth M. Wats, Weyerhaeuser Timber Co., Longview; W. E. Wegner, Crown Zellerbach Corp., Camas; J. W. Weiblein, Columbia River Paper Co.; L. A. Wendt, Weyerhaeuser Timber Co., Everett; J. W. Wenger, Crown Zellerbach Corp., Camas; E. N. Wennberg, Columbia River Paper Mills; W. A. Wenzel, Longview Fibre Co.; R. S. Wertheimer, Longview Fibre Co.; Jack Wilcox, Electric Steel Foundry Co.; John A. Wilcox, Longview Fibre Co.; Albert Wilson, Pulp & Paper Industry; R. P. Wollenberg, Longview Fibre Co.; H. H. Wymore, Crown Zellerbach Corp., Camas; Thurston L. Yocom, Crown Zellerbach Corp., Camas; and E. V. Young, Columbia River Paper Mills.

Hoyt Back At Hawley

Don Hoyt, for three years an ensign in the U. S. Navy, has returned to the Hawley Pulp & Paper Co., Oregon City, Ore. He takes over as head of the sample room, where he was assistant to the head before entering the armed services.

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NEW ORLEANS

SEATTLE



TOM G. TAYLOR, 304 Wilma Bldg., Missoula, Mont., principal organizer of company which is planning sulfate mill and all-around woods industry on Flathead Lake outlet at Polson, Mont.

May Start Building Montana Mill In Spring—Plans Sulfate Products

The Idaho-Montana Pulp & Paper Co., planned strictly as a Montana-owned and financed corporation, is progressing according to plans, says Tom G. Taylor, who with Montana associates, is organizing and financing the project.

Mr. Taylor mentioned to PULP & PAPER INDUSTRY, for the first time, a date for the possible beginning of construction—the month of May. Also, plans to make sulfate pulp—instead of sulfite—as had been originally and tentatively projected—were revealed.

A diversified industry, however, is planned. Capitalized for \$3,500,000, it is eventually intended that lumber, plywood, pulp and paper will be the products.

A site has been secured, comprising

65 acres, with a 2,500-foot frontage on Flathead River, at Polson, Mont., and the outlet of Flathead Lake.

Engineering and designing is being done by L. A. DeGuere, pulp and paper mill engineer of Wisconsin Rapids, Wis. The project is so designed as to be constructed in units, each unit being a feeder for the one to follow. In building that way, it is believed the factory may get some of its products on the market much earlier than by waiting until the completion of the entire project.

There is said to be sufficient raw material—wood, water and power to keep a kraft pulp and paper plant going at a capacity of 150 tons daily for many years on a sustained yield basis.

Williamson Heads Strathmore Paper Co.

George E. Williamson has succeeded John D. Zink, resigned, as president of Strathmore Paper Co., West Springfield, Mass. Mr. Williamson has been holding the post of vice president and treasurer since 1942. He joined Strathmore in 1911 as chief engineer, and became assistant to the president in 1926, and later held the office of treasurer. He is also president and a director of Premoid Products, Inc., and of Agawam Chemicals.

Strathmore has also announced the election of F. Nelson Bridgman as treasurer. He joined the company in 1910.

West Virginia P. & P. To Expand at Charleston

The West Virginia Pulp & Paper Co., Charleston, S. C., was authorized by the War Department on January 21 to take temporary possession of Warehouses A and B of the Charleston Port of Embarkation. This will enable the company to proceed with its \$5,000,000 expansion program.

The South Carolina State Ports Authority is seeking a more permanent basis of possession to permit the extension or signing of long term leases to industrial users.

Turcotte Heads Chamber

Lawson P. Turcotte, executive vice president of Puget Sound Pulp and Timber Co., was recently elected to the presidency of the Bellingham (Wash.) Chamber of Commerce.

Bob Mispyle Gives Talk

"Chemistry's Contribution to the Development of New Consumer Goods" titled a talk made by R. G. Mispyle, assistant technical director, Central Technical Laboratory, Crown Zellerbach Corp., to members of a state-wide conference on marketing and distribution of agriculture products, held at Oregon State College, Corvallis, Ore., on January 16 to 18.

Bonneville Power Promotion Evaluates Proposed Montana Mill

"Economic Base of Power Markets in Flathead County," by George Sundborg, of the Bonneville Administration, says "because of fairly large Engelmann's spruce timber stands, the outlook for success of a pulp and paper venture in Montana is probably the best it has ever been."

He points out that pulpwood is being shipped from Montana for \$22.50 a cord and at freight cost of \$10 a cord to Wisconsin mills, but concedes these high rates may prove merely a wartime phenomenon.

He says rate inequalities at Polson would permit sharp competition with West Coast mills for the Rocky Mountain area market for 30,000 tons of newsprint and 43,000 tons of other paper annually.

Of 206 Middle West paper mills, he pointed out that 150 buy their pulp. However, a Montana mill, he added, would ship at exactly the same cost as a Pacific Coast mill despite a 600-mile shorter haul. "Canada, with its large stands of black spruce, has heretofore been in a more favorable position than western Montana to reach this market. Even the Scandinavian countries normally can land sulfite pulp in the Great Lakes at relatively low cost."

He concludes that a pulp mill might enjoy relatively low wood costs, with a possibility of large scale

cutting at \$8 per cord for spruce delivered to Flathead Lake, utilizing both farm-lot, private, and forest service timber.

The 1940 saw-timber volume of pulp species in Flathead County—Engelmann's spruce, grand and alpine fir, lodge pole pine, hemlock and cottonwood on commercial forest land, was set at 2,279,600,000 bd. ft., with an allowable annual drain of 24,200,000—sufficient to provide 70% of pulpwood required by a 100-ton daily production capacity in perpetuity.

Claude W. Stimson, in a survey, "Lake County, Montana," mentions The Idaho-Montana Pulp & Paper Co. and its plans, remarking that "this concern is at present engaged in selling stock to enable it to proceed."

He expands the matter in relation to this county alone, showing it could furnish only about eight per cent of the raw material required, but suggests, "The proposed mill, while small, might achieve important efficiencies through integration of the main operation with sawmill, plywood, remanufacturing, and by-products utilization."

Two sawmills, of 10 M and 35 M 8-hour shift capacity were operating at Polson, Montana, during the year 1944 under the name of Flathead Pulp & Paper Co.



Pacific Coast Representative
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To the Ladies: Hail and Farewell!



TWO OF THESE WOMEN have turned their jobs over to returning service men—one making way for her husband's return. Jobs of the other gals—including pistol-packing one—have ceased to exist.

Upper row (left to right): Marjorie Owens, knitter screen tender at Everett mill of Weyerhaeuser Timber Co., was brought to the mill by her husband, E. J. Owens, who later went to South Pacific with Marine Corps. He left job just above her's, as blow pit operator. He's back on his job and she's back in the Owens' kitchen.

Bernice Ruble, first woman hired on man's job at Hawley Pulp & Paper Co., Oregon City, was Women's Supervisor. Later she was in charge of Sample Room, but last month turned that job over to service man.

Lorina Hedges, Guard at Gate at St. Helen's Pulp & Paper Co., St. Helen's, Ore., when the war was on and gates were strictly guarded. She now works in office of Bemis Bag Co., St. Helen's.

Two girls in Soundview Pulp Co., Everett, in uniforms which were supplied to them, wrapping rolls of nitrating pulp for use in army shells. The nitrating pulp program has been discontinued and so have these jobs.

This is good-bye to the thousands of women who for four long years did the jobs of men in the pulp and paper mills of the U. S. and Canada. And "hats off" to those ladies for a job well done!

Thousands of them already have left the mill jobs. Of course, there remains thousands more in finishing rooms, offices and laboratories,

just as there were before the war. The few permanent additions are mostly in the laboratories.

In many mills, the entire force of women who were doing men's jobs was released in December or January. However, perhaps in almost an equal number of mills, the releases were more gradual and a few women stayed on, pending the ex-

pected return of war veterans whom the mills were obligated to re-employ. This was decided upon as the easiest way to make the shift, especially where it was definitely known that certain men would be returning shortly.

There were a comparatively few scattered cases where women appear to have won permanent mill jobs. For instance, in Wisconsin, women clean-up crews for the paper machines made such a fine record in one mill which the management decided their work was superior to what men had done on that particular job and so would remain.

Labor agreements generally required that women in men's jobs receive men's pay. The increases for men under the new agreements of the past several weeks were higher than those for women's jobs. But under most of these new agreements, it was formally, or informally, requested by the unions that women be released as soon as possible. Only by their departure, were jobs made available for many war veterans and in most cases the women were glad to return to their "jobs" at home. Many of them were relatives of men in the service (see accompanying picture) and said they were just holding jobs for their men folks.

In a few labor shortage areas, in some California mills for examples, women continued on quite a number of jobs but this was temporary.

At the big Soundview Pulp Co. at Everett, Wash., there was a peak employment of 140 women in what had been an "all-male" mill. Crews in attractive uniforms, some of them shown in a picture on this page, wrapped the rolls of nitrating pulp for the ammunition arsenals. When the mill went off nitrating pulp and resumed shipping pulp in flat packages to paper mills, the women's jobs ceased.

Typical of mills all over the continent, were the wartime peak employment of 60-70 women in the St. Regis kraft pulp mill in Tacoma and of about 40 women in each of the Weyerhaeuser pulp mills.

Some of the jobs women did—which they and their friends and children probably will talk about for years to come—included handling big newsprint rolls, feeding pulp-wood grinders, driving left trucks or overhead cranes, baling paper or handling the push-buttons in the wood breakdown plants.



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Sutherland Paper Company Announces \$2,000,000 Expansion

An expansion program to cost nearly \$2,000,000 for the Sutherland Paper Co., Kalamazoo, Mich., has been announced by L. W. Sutherland, chairman and president.

Reconstruction of two paper machines and other expansion is calculated to give this company an increased production of 15,000 tons of paperboard per year. The company normally produces 400 tons daily of folding cartons and paper specialties. On this basis, the mill is capable of producing approximately 120,000 tons annually at the present time.

A new coating for paperboard, new laminating equipment, one new five color and several two color high speed printing presses, new cutting presses, rewinders, slitters, and additional cup machines are among the new installations to be made.

Mr. Sutherland and his associates hope that most of them will be installed by the end of 1946. A 2.1% ten-year loan of \$1,500,000 will finance most of the expenditures.

Two new buildings are now under construction.

One is Plant No. 5 of 128,000 square feet, not including basement, which will house equipment for dry cartons and paper handle drinking cups. The other is Plant No. 6, 96,000 square feet not including basement, to house printing and cutting machinery and an ink processing



LOUIS W. SUTHERLAND, President and Chairman of Sutherland Paper Co. of Kalamazoo, one of the biggest paperboard mills in the U. S., who has an expansion program to cost nearly \$2,000,000. Mr. Sutherland recently took over the Presidency in addition to Chairmanship when R. E. Rutledge resigned.

plant. Only paraffine cartons and specialties will be manufactured.

A. J. Young and G. E. Graham are vice presidents of the company and William Race is secretary-treasurer. R. E. Rutledge recently resigned as president and his duties were assumed by Mr. Sutherland, the board chairman.



THE RATIO OF WOMEN TO MEN on jobs in most pulp and paper mills up to last month is indicated in this picture of one of the shifts at the Everett (Wash.) pulp mill of Weyerhaeuser Timber Co.

Here are shown eight women—about one-third of the shift when this picture was taken. Last month only three of these women were still on the payroll, one on sulfite mill cleanup, while two of these three had been transferred to laboratory jobs.

L. R. Hartman, recently promoted to Master Mechanic, is fifth from left in the row behind the women. When this picture was taken he was Shift Foreman.

A. L. Sherwood is technical director, Earl Dunton, chief engineer; D. D. Bachelder, purchasing agent, and Clifton T. Wilson, promotion manager.

Swedish Pulp Supply Short—To Renew OPA Pressure

In every pulp and paper quarter of New York City the word was definitely out last month, in the bleakest ebb of pulpwood supply in modern industry history—the Swedes are going to be tough about price. More than one buyer and seller of foreign pulp had the word, and in writing or cablegram: Sweden producers are not going to ship to the U. S. at the present prices.

But the Swedes probably won't be alone in this campaign as pulpwood and pulp ceiling prices are not encouraging U. S. production, either. The situation is so grave that word was going the rounds that allocation might return. But the answer PULP & PAPER INDUSTRY got was not whether or not, because nobody yet knows for sure. The answer was always: "Let's hope not!"

It was pointed out by some pulp sales executives that this is the logical time for the Swedes to renew whatever pressure they can bring upon the U. S. State Department and the OPA for a higher price for two reasons:

(1) It is time for the freeze-up of the Baltic, which permits only costly overland shipment of pulp from northern Swedish mills, if any pulp gets out at all.

(2) Swedish pulp inventories have been greatly reduced in the past few months. Swedish pulp imports to the U. S. will be reduced unless OPA manages an overall boost of about ten per cent, with an increase of six to seven per cent for unbleached kraft and more for the bleached product, according to Einar Flygt, vice president of the Swedish Cellulose Co.

First Finnish pulp shipped to the United States since 1939 arrived at Boston last month on a Swedish ship. It amounted to only 85 tons of sulfate pulp, but was part of an order for 800 tons, of which 300 were to be delivered before April 1.

IMPORTS OF SWEDISH PULP

V-E Day Through Jan. 24, 1946—First postwar shipment was June 25	Value
Short Tons	Dollars
Unbleached groundwood	30,641
Bleached groundwood	1,177
Unbleached sulfite	321,185
Bleached sulfite, rayon and special grades	3,670
Other bleached sulfite	57,067
Unbleached sulfate	321,723
Bleached sulfate	28,154
All soda pulp	39
Unclassified	1,338
	312,596
	4,219,066
	19,492,195
	2,046,229
	2,119
	77,992

Total (in 7 months of shipping) 764,994 \$47,201,070
Data supplied by the U. S. Bureau of the Census.

NEARLY 2000 YEARS AGO in China, Ts'ai Lun first discovered and developed the paper-making process.



Mulberry bark or rags were mashed, mixed with water, poured over a screen, dried.

Paper

PACEMAKER OF PROGRESS



Seven hundred years later, the Arabs forced the secret from some Chinese captives.



The Arabs carried the secret of paper-making to Bagdad ... whence it reached Cairo.



A thousand years after its discovery—this valuable art first appeared in Morocco.



When use of the process arrived in Spain, rags were pulped in a stamping mill.



It took 200 years for a knowledge of paper-making to spread through France, Italy, Germany, Holland, and England. The quality of hand-made paper improved and its uses steadily increased, but the basic method of making



paper remained unchanged. It was still another 200 years before William Rittenhouse erected, at Germantown, Pennsylvania, in 1690, the first paper mill in America. The following century saw 100 mills operating in the Colonies.



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Kenwood Mills

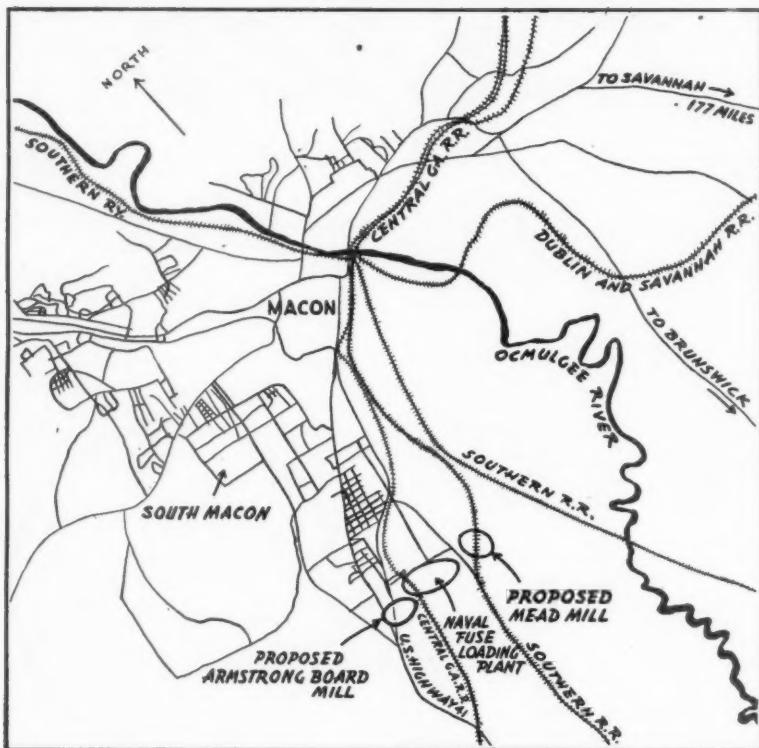
Albany New York



Nearly 17 centuries passed while a knowledge of paper-making travelled from its birthplace in China to the New World. Yet in only a little more than 75 years since the introduction of the wood-pulp process and the development of the felt industry in the United States, plentiful paper has helped to revolutionize culture and civilization. This dramatic story is graphically told in the forthcoming sound-color film "Paper—Pacemaker of Progress," presented as a tribute to the paper industry by F. C. Huyck & Sons on its 75th Anniversary.

Pacific Coast Representatives: Pacific Coast Supply Co., Public Service Bldg., Portland, Ore.; 343 Sansome St., San Francisco, Calif.

Mead Corp. Exercises Option on Macon Site; New Armstrong Board Plant Will Be Nearby



Plans of the Mead Corporation for the construction of a \$10,000,000 pulp and board mill at Macon, Ga., have progressed far enough for the exercise of the company's option on a 125 acre site, according to Herbert A. Kidd, who is handling details in Georgia. The option was exercised on January 27.

"Due to unsettled conditions," said Mr. Kidd, "it is difficult to say as to when we will actually break ground." It is understood that the plans are to break ground this spring, with production scheduled for the middle of 1947.

Pulp from the new Mead plant will be converted by a unit operating under the title of the Macon Kraft Corporation, which will be the largest container board plant in the country, according to Macon sources.

The site of the new Mead plant is six miles from the center of Macon, and is located on the Georgia, Southern and Florida Railway south of the Naval Ordnance Plant. The ordnance plant is on the Guy Payne Road. The general location is south of Macon and is reached via U. S.

Highway Route No. 41.

The Central of Georgia Railway has acquired a right of way to the Mead site.

The final determination upon the site was preceded by acceptance of a favorable report made by local business men who had made a tour of other southern mills to determine whether or not the odor from the plant would be objectionable.

Near the Mead site is the location of the ground on Guy Payne Road where the Armstrong Cork Co. will erect a \$5,000,000 unit for the production of fiberboard, which is manufactured from loblolly pine. This site is served by the Central of Georgia railroad.

The first announcement of the new Armstrong plant was made by H. W. Prentis, Jr., company president.

A. H. Mahrt, treasurer of the Mead Corp., made the original announcement that the company contemplated a new unit at Macon.

In "Heart" of Georgia

Macon, county seat of Bibb County, is six miles from the geographical center of Georgia. A focal

point for highways, it is well serviced by five rail carriers, and air line, and motor vehicle lines.

Originally a trading post opposite an Indian village, it became "Macon" in 1823. The 1940 census placed city population at 57,865 and Greater Macon at 74,800. War time activities which included \$41,000,000 in national defense establishments swelled the city population to an estimated 75,000, Greater Macon to 97,000, and Bibb County to 110,000 persons.

Industrially, Macon is important, having 160 plants of 60 classifications. Sixty-five per cent of Kaolin (used in production of paper, aluminum, rubber and other products) comes from Georgia, and the major part from near Macon. Electrical energy is furnished by the Georgia Power Co. from 22 hydro-electric and 12 steam electric generating plants.

Municipal water is drawn from the Ocmulgee River, which also will supply the Mead Corp. The water in the river is soft, containing less than 3 gr. per gallon of solids.

The city occupies a group of hills overlooking the Ocmulgee river where the Piedmont Plateau merges with the Coastal Plain. The altitude ranges from 312 to 515 feet. The streets are surprisingly wide, a convenient feature today. Municipal affairs are aided by an active chamber of commerce. The community has ample recreational features, including an auditorium seating 4500 and a stadium seating 11,000 persons. Bank deposits are in excess of \$25,000.

Wood Supply

Macon is 177 miles from Savannah, and 191 miles from Brunswick, coastal sites of other paper mills, that latter being a Mead-Scott joint operation. This coastal area is a competitive area for pulpwood.

Georgia has the largest forest area among the United States consisting of approximately 22,550,000 acres or 61% of its total area. More than 50 types of commercially valuable species of trees are found. The current estimated value of Georgia's forest products is \$150,000,000 annually. Among the important forest products are naval stores, lumber, pulpwood, veneer, tool handles, charcoal, cross-ties and rayon.

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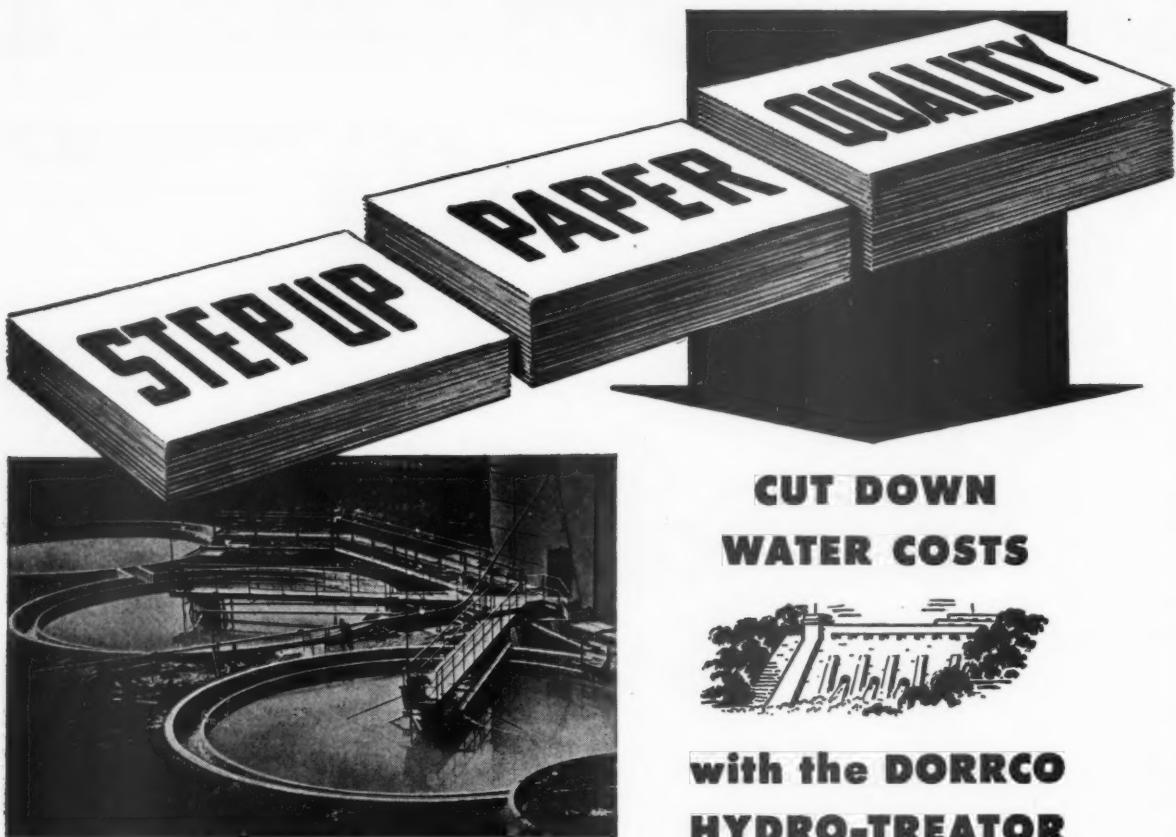
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Commission With Wide Powers May Supervise Forests

British Columbia's pulp and paper operators heartily agree with the major recommendations of a report by Chief Justice Gordon Sloan of the province on forest industries.

The report substantially supports the brief submitted by the pulp and paper industry to the chief justice last summer. This program contained a series of recommendations calculated to enable the government to achieve its basic objective—sustained timber yield, while at the same time making it possible for pulp and paper production to be maintained on a satisfactory basis.

Most important of Commissioner Sloan's recommendations is that the British Columbia government should proceed to appoint a three- or five-man commission to administer the forests of the province—a commission with wide powers and full authority over the forest service and control over all funds paid into the government in the form of forest revenue and paid out for forest maintenance.

This recommendation is in entire agreement with the views of pulp and paper executives consulted by PULP AND PAPER INDUSTRY, who said appointment of such a commission is essential if the long-term program is to be successfully carried out.

"The chief reason compelling me to this conclusion is the long-range planning required, without which it will be impossible to change over from our present system of forest liquidation and depletion to one of sustained yield management," said Commissioner Sloan. "We must, in dealing with this problem, project out perspective over the long periods it takes to grow and harvest forest crops. We are called upon to plan, not for today nor for tomorrow, but for generations ahead. . . .

"This kind of planning has its concomitant, long range financing. The present system of annual appropriations from the general revenue, for which the forest service must compete with other spending departments of government, is subject to vagaries in general business activity, the exigencies of short-term financing and the uncertainty of money supply due to temporal variations in government receipts available for departmental allocations. These factors, coupled with recurrent periods of transitory demands for increased expenditures in social and economic

fields unrelated to forestry have in the past and will in the future, under the present system, retard if not frustrate any long term policy of forest management. . . .

"The only way in which direct treasury control over departmental appropriations may be avoided is to place the forest service under a commission empowered to collect all direct forest revenue and to expand all or that part thereof as may be necessary to finance adequately its operation. . . . I recommend that the commission be not imprisoned within the iron framework of prescribed rules and regulations, but that within its own sphere of activity it be given a free and powerful hand."

Opposition Expected

There are indications that the provincial government may balk at this recommendation, first, on the ground that forest revenue represents a large and important source of public income and should therefore continue under the more direct control of government and, second, that the province already has too many commissions and that commission form of administration, wherever possible, should therefore be discouraged. On this subject, the Sloan report said:

"Objections have been raised from time to time to what has been described as an 'ever-increasing bureaucracy,' but it must be recognized that modern development in the fields of economics and sociology have thrust upon government duties and obligations that are difficult if not impossible of fulfilment by the same departmental processes that were designed to function in the horse and buggy era. Delegation of authority to commissions in technological fields has been found an effective way of adapting existing processes of government to the requirements of a modern civilization."

Among the other recommendations in the report are that:

1. Forest protection be greatly increased.
2. Rate of planting denuded areas of productive forest land, especially on the coast, be greatly increased.
3. Logging methods be regulated to prevent destructive exploitation and to insure full regeneration of cut-over lands.
4. New systems of tenure and taxation be formulated to encourage



CHIEF JUSTICE SLOAN of British Columbia, whose investigating commission has recommended a three or five-man board with broad powers over forest industries' use of wood resources. This year may see his measures enacted in law. Four pulp mills are big users of timber in the province and there may be two or three more mills in a few years.

age private forestry and to remove causes compelling liquidation.

5. Management plans for individual regional working circles aimed at sustained yield be formulated and implemented by regulations.

6. A long-term program of general education in forestry subjects be inaugurated.

7. More intensified research in silvicultural methods be undertaken.

8. Facilities and funds be provided for extensive forestry research.

"Our forest industries," declares the commissioner, "have been living on an expenditure of forest capital that has taken hundreds of years to accumulate at no cost to industry. The time has now come when we have to plan to live on forest interest and maintain our capital unimpaired."

It seems unlikely that the British Columbia legislature will have time during its early 1946 session, probably to begin late in February, to deal with the report to the extent of passing any of the legislation, but an attempt will be made to implement at least some of its commendations later in the year.

Craig to Manage LongLac Sulfate Pulp Mill; Nelson, Swanson and Lyons to Direct Planning

Appointment of H. S. Craig as manager and B. J. Donovan as assistant manager of the new LongLac Pulp & Paper Co., Ltd., has been announced by Cola G. Parker, president of Kimberly-Clark Corporation.

Headquarters offices for LongLac, a Kimberly-Clark subsidiary which will operate a bleached sulfate pulp mill in an undeveloped section of the Lake Superior area, have been established at 263 Adelaide Street West, Toronto. The mill will be near Schreiber, Ont.

For the construction period, the executive staff will center largely under C. W. Nelson, chief engineer for the parent company; W. H. Swanson, an assistant general superintendent for Kimberly-Clark and R. W. Lyons, general manager of the Woodlands department.

Mr. Nelson will devote most of his time for the period immediately ahead to LongLac as will Mr. Swanson, whose staff will be in charge of process and operating phases of the new project.

B. F. Smith has been named project engineer and G. H. Spaulding will direct power administration. Other Kimberly-Clark departments will also function in the LongLac development.

Additional appointments include the following department heads: R. J. Shemanski, controller; F. A. Laughlin, purchasing and traffic, and H. C. Laundy, industrial relations. A. F. Buell, now in residence at LongLac, will be in charge of woodland operations.

Stadler, Hurter & Co. of Montreal have been retained as consulting engineers.

Giacomo Faludi, noted town planner who is at present laying out a civic program at Windsor, Ont., has been engaged to plan a modern townsite for LongLac.

Eventually, it is expected that some 3000 men will be given employment in LongLac enterprises. Sulfate pulp suitable for book paper and crepe wadding will be the principal product of the mill, whose capacity probably will be around 250 tons daily.

The Hydro Commission's new 45,000 horsepower plant, described in these columns last month, will cost an estimated \$8,500,000 for construction alone and will employ about



GEORGE L. CLARKE, for past 10 years with Southern Kraft Div., International Paper Co., at Cullendale (Camden), Ark., has joined Pulp Department Staff of Kimberly-Clark Corp., Neenah, Wis.

Last month PULP & PAPER INDUSTRY published the announcement that Kimberly-Clark, long outstanding in the sulfite field, will build a new sulfate pulp mill known as the LongLac Pulp & Paper Co., near Schreiber, Ont. Mr. Clarke, graduate of U. of Minnesota and Institute at Appleton, Wis., will be attached to office of W. H. SWANSON, an Asst. General Supt. in charge of pulp manufacturing.

450 men while the project is under way.

Pulpwood, which will be driven down the Nipigon River, will be stored in a new forebay. The Hydro Commission's dam will be built between prominent rock bluffs and have a maximum height of 150 feet. It will raise the water level at that point about 70 feet and create a large head pond.

Hudson Top Offices Reorganized As Work Progresses in Florida

Jacob (Jack) Mazer has been appointed to the new position of executive vice president of Hudson Pulp & Paper Corp., as a result of the beginning of construction of a new Palatka, Florida, 150-ton sulfate pulp and paper mill by that company.

Abraham Mazer continues as president of the company, with William Mazer as another vice president and Joseph M. Mazer as treasurer, the position which Jacob Mazer formerly held. Sam A. Lopin, a director,

Brownsville Paper Co. Changes Hands

For a long time there have been rumors in the Black River Valley that Samuel A. Upham and associates were being opportuned to sell the Brownsville Paper Co., Brownsville, N. Y. Reason for Mr. Upham's hesitancy, it was said, was that he wanted to be certain that the new owners would not discharge or upset old-time employees, from officers right down to men and women in the mill.

Last month he sold to a group in which he has confidence—other officers of the company—and although no longer a stockholder, Mr. Upham will be chairman of the board and his experience and advice "will be welcome," as Seymour M. Jones, vice president, phrased it to PULP & PAPER INDUSTRY in Brownsville.

Stockholders who have been in control since 1894 and who have sold at a figure not disclosed were Samuel A. Upham, the George F. Clarke Estate, Mrs. Minnie F. Clark, Mrs. Elizabeth S. Upham, and Howard M. Root.

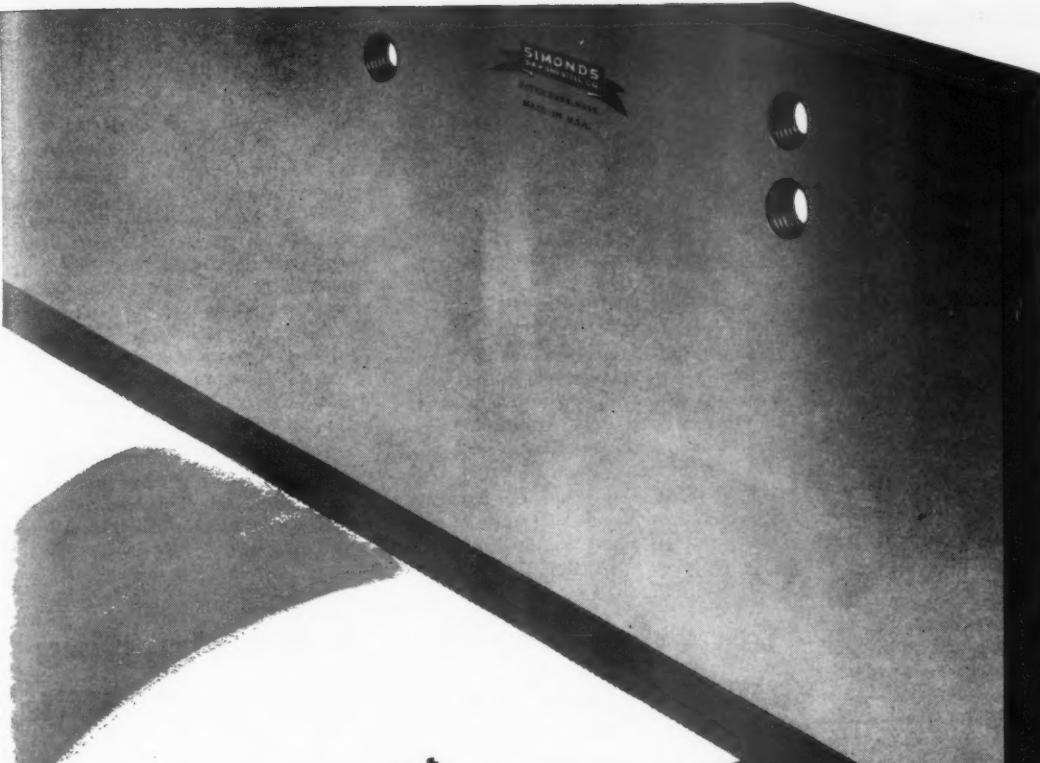
The new officers are Robert L. Pease, president; Seymour Jones, vice president; James H. Lingenfelter, treasurer; Alfred L. Soper, secretary; and Albert Horr, assistant secretary.

No changes in equipment or personnel are planned at the present time, and the mill is running at capacity. The Brownsville mill has a capacity of 20 tons in 24 hours, and makes sulfite manifold, colored poster, railroad manila, carbonizing papers, and colored specialties. It is one of the oldest mills in New York

was made secretary of the company.

These will be officers of the Hudson Pulp & Paper Corp. of Maine, also.

The new mill in Florida is to be known as the Southern Division of the company and is expected to cost in the neighborhood of \$6,000,000. Construction is progressing at the site, which is within 50 miles of Jacksonville and 25 miles from a rapid-growing forest area. A new 232 inch Fourdrinier machine has been ordered.



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Spaulding's Emergency Log Barker Is Example of Mills Engineering Ingenuity

As an example of a job done in interest of saving a vital resource, but accomplished under difficult wartime conditions, a new mechanical log barker at Spaulding Pulp & Paper Co., Newberg, Ore., stands as a case in point.

Forced to reduce wood fiber loss, this company constructed a temporary device to bark logs. In its demand for priorities, management met with the obstruction of the usual OPA \$5,000 cost regulation. The mechanical barker which the company built was completed within the limits of this arbitrary figure and after a great deal of difficulty over regulations, despite its purpose to save the short and critical wartime supply of wood.

Robert Bauden, said at the time of completion, over a year ago, "there's nothing new about it," and the principles involved are well known. However, it is a novel-appearing machine and perhaps a new feature is V belting which hooks the barker head to the crane motor. All of the parts were secured wherever they could be found, and everything had seen use before.

Despite these drawbacks, the barker accomplished exceptionally clean barking with scarcely any wood waste. Sixty to 65 logs per eight-hour shift can be run through. Built of whole logs, peeled, the barker structure is well-engineered and well-constructed. Set on the edge of a 20-acre pond, the device hoists logs to the deck at the rear by means of cable slings, and discharges them into the pond again after the barking is completed.

Railroads irons have been utilized

for the rollway down to the log stops. On release, the logs roll into a trough where they are caught on chain which then elevates them and keeps them rolling as the barker moves along above them, on a full length travelway to accomplish bark removal.

All of the operations are electric powered.

Logs cold-decked on the bank of the pond are transferred to the water by a power hoist, and are kept moving toward their destination by a specially constructed, steel-hull, gasoline powered boat.

J. B. Wilt, resident manager, says the structure is not pleasing to the eyes, but its operation has proved

quite satisfactory. However he admits that the present barker grew from wartime necessity, and will be replaced ultimately by an hydraulic barker. Savings effected by the mechanical device have gone a long way toward proving the time and fiber-saving economics of the water pressure method. Toward this end Spaulding Pulp and Paper Co. is now studying all types of hydraulic barker installations to determine which will best solve its individual problems.

Management is further solving a deeper problem in getting the timber supply stabilized. This, too, is being satisfactorily accomplished on a long range program.

Canadian Sumner Is Constructing Whole Log Barkers for B. C. Mills

As a first step in improving its productive facilities at the Wood-fibre mill, British Columbia Pulp & Paper Co. has placed an order with Canadian Sumner Iron Works, Vancouver, B. C., for a Sumner hydraulic log barker based on Crown-Zellerbach patents.

This is the first unit of its type to be manufactured in British Columbia. The only hydraulic barker previously ordered by a pulp and paper organization in the province was a Weyerhaeuser type unit for Powell River Co. at Powell River.

Coupled with the B. C. Pulp & Paper Co. barker will be on one of

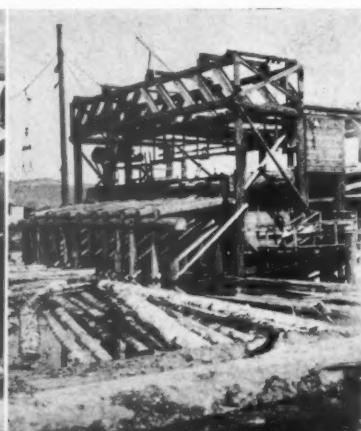
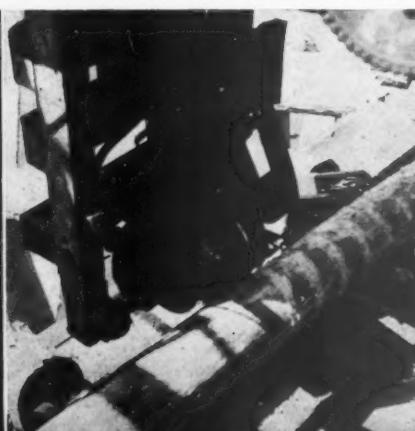
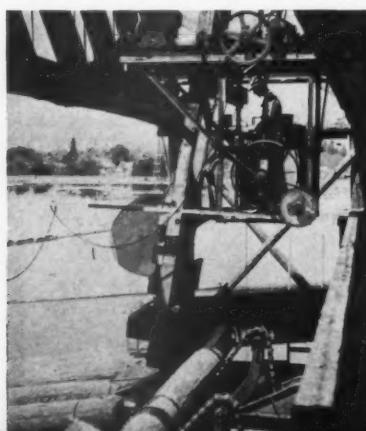
the largest chippers ever built by the Sumner organization and the largest to be installed in British Columbia.

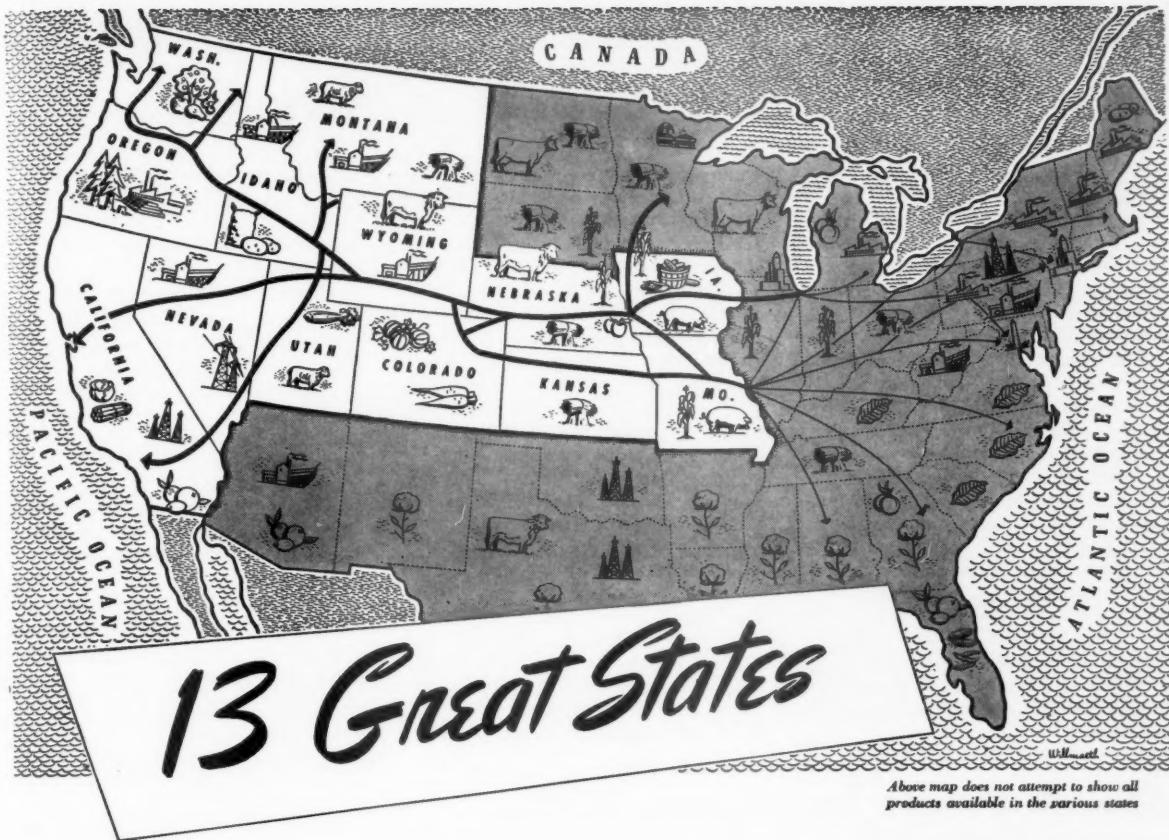
The chipper disc is 175 inches in diameter, and will be driven by a 1,000 h.p. directly connected motor. It will weigh over 100 tons and will be able to handle full-length logs 42 inches in diameter and 20 feet long.

Canadian Sumner Iron Works announces that it will manufacture a complete hydraulic slab barking unit for Bloedel, Stewart & Welch, Ltd.'s new pulp mill at Port Alberni, B. C., on Vancouver Island.

A MECHANICAL BARKER, ERECTED BY SPAULDING PULP & PAPER CO., Newberg, Ore., as a wartime necessity, will be replaced ultimately by an hydraulic barker. Here (at left) Robert Bauden, operator, has a log on chains, and is bringing head into play to remove bark. Peeler head (middle view) was hooked to its motor by 7 strands of V belt and the whole mounted on swing frame which gave contact

with, but too great pressure, against log. The operator, on a platform above, rode with barker on its 60-foot path of travel. General view of barker plant (right). Construction is of peeled logs, providing only an essential structure, with log slip and cable sling hoists at the back, a rollway to the log stops, the log roller jaws and chain with barker travelway above, and an incline release for return of logs to the pond.





Above map does not attempt to show all products available in the various states

For more than 75 years, Union Pacific has served thirteen western states . . . been a partner in their development.

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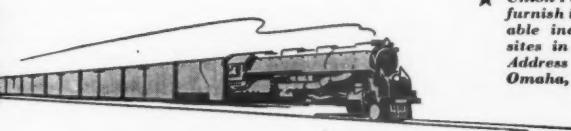
In the Pacific Northwest, for example—a large source of supply for the paper industry—Union Pacific has the

equipment and personnel to meet all the requirements of shippers.

These thirteen western states served by the railroad are ripe for postwar expansion. They have the materials, facilities and space.

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The Progressive

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The Strategic Middle Route

New Paper Machine at Union Bag Will Raise Kraft Quality Range

Installation of a new paper machine at Union Bag & Paper Corp., Savannah, Ga., and enlargement of the bag factory there to provide conversion and storage facilities for additional paper are announced by Alexander Calder, president of the company.

The contract for the new paper machine has been awarded, and it is expected to be in operation early in 1947, Mr. Calder stated.

The new machine is to be a Pusey & Jones 236-inch fourdrinier, identical in dimensions and make with the four other machines now in operation at this mill, three of which have been making paper, while one has been on board production. Daily average tonnage of the new machine is to be 160 tons, but Mr. Calder stressed the addition is not intended so much to provide an increased output as it is to expand the range of products.

The additions to the bag factory will approximate 195,000 sq. ft. of floor space, with construction starting soon. This mill is noted for its tremendous battery of some 150 bag machines, some of them making 500 bags a minute.

The announcement by Mr. Calder follows upon previous expansion announcements published in recent months in **PULP & PAPER INDUSTRY**, which disclosed that Union Bag's program includes a new pulp washing building, new water treating plant, and boiler house additions including a ninth fuel fired-boiler. Some of this work is already far advanced.

It was previously announced that pulp production would be increased from 800 to 1,000 tons per day and also 1,000 tons of finished products would be made daily.

Mr. Calder referred to the new paper machine as "the last word in

papermaking equipment for the production of super quality specialty packaging papers," and stated that the installation of five modern kraft paper machines under one roof will establish a world's record.

Mr. Calder recalled that ten years ago the first unit of the Union Bag plant came into production at Savannah and that during this time the number of employees has been increased from under 900 to more than 4,000, and annual wages from less than \$1,000,000 to more than \$7,500,000, the figures not including the employment and payroll of some 2,500 independent woodlands workers.

Due to uniformity of size, many of the parts of all five paper machines will be interchangeable, providing insurance against shutdowns caused by having to wait for replacement parts.

Starch Prices for Paper Mills Will Be Based on Other Markets

There are large stocks of Jap tapioca available, but the quality has not yet been ascertained—and starch prices are going to be based on the farmer's present ability to sell high in other markets. Potato starch is reasonably available from Idaho, and some materials from grains are in stock. But we are going into a period when good inventories will be a great comfort, and mill managers must have faith in their suppliers both as to products and supply.

Those were a few of the facts of life faced up to by members of the Northern New York section of TAPPI at their Jan. 10 meeting at Hotel Woodruff, Watertown, N. Y., when Clifford T. Fogarty, Stein-Hall Co., spoke on "New Developments in Starch."

The Northern New York group of the Empire State meets the second Thursday of every month at Watertown, and there are always from 45 to 65 in attendance for both dinner and meeting. This year they convene at 7 p. m. under the able chairmanship of Chace Mather, chemist, of the St. Regis mill at Deferiet.

At the January meeting the group

considered tentatively the possibility of a joint meeting in the spring of Northern New York TAPPI with New York-Canadian superintendents, with Montreal or Niagara Falls as possible gathering sites. Definite action was put over until a subsequent meeting due to the announcement of the national superintendent convention at Poland Springs, Me., in June.

Those in attendance were: R. J. Hackett, Sven Fahlgren, Walter Herbert, E. A. Godfrey, Ralph Prince, C. S. Booth, J. H. Treadwell, C. T. Fogarty, D. C. Mather, Martin Jaffe, H. A. Spencer, C. F. Haskins, Nard Jones, Pulp & Paper Industry; Leo P. Newton, David F. Lawlor, E. A. Mahannah, George Duers, W. B. Mills, K. C. Strough, T. E. Loessi, M. D. Myers, T. Newcomb, B. H. Treadwell, Don Crainer, Ted Button, W. R. Adams, H. Remington, D. K. Cooper, Jr., B. W. Barrows, L. J. Van Alstine, Stanley Donaldson, R. G. Redder, H. L. Mellen, H. B. Peterson, S. A. Brunell, S. J. Young, Henry J. Perry, Fred C. Goodwill, J. V. Wolff, Roy Brothers, Roy Foley, W. J. Argy, C. H. Plantz, A. A. Zando.

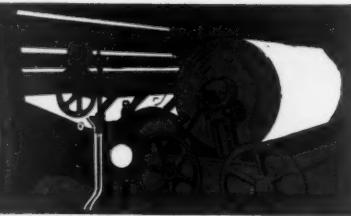


TCHL. SGT. RAYMOND K. SALMONSON, 30, back from serving in U. S. Army 9th Air Corps in Europe, is son of Sam Salmonson, Asst. Gen. Supt., Soundview Pulp Co. Prior to service, young Salmonson was statistician in Soundview's power dept. During past month, he made Pacific Coast tour of mills with his brother Walter, manufacturers' representative.

Mills' Flood Loss Slight

Damage from Willamette River flood stages, although running to seven figures on the upper river with nine lives lost, were minor at Hawley Pulp & Paper Co., Oregon City, and at the West Linn, Ore., mill of Crown Zellerbach Corp. Most loss occurred from curtailed production between January 1 and January 5.

STANDARD ENGINEERS NOTEBOOK

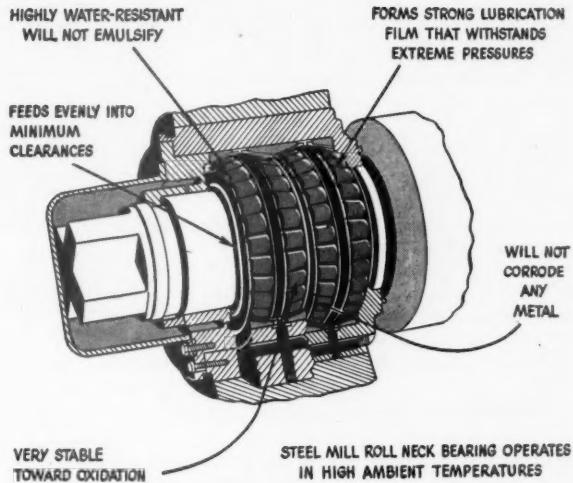


Pale engine oils reduce wear on plain bearings

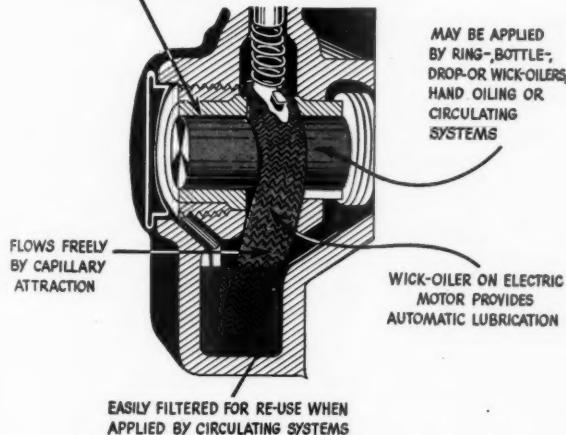
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Calol Engine Oils may be applied by all types of oilers and the heavier grades may be used in circulating systems in which oil is filtered and re-used.

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Bill McGinnis Tours South For Appleton Woolen Mills

A well known figure in the pulp and paper equipment field who is rapidly extending his friendships in the Southern territory is William J. McGinnis, district representative of Appleton Woolen Mills, manufacturers of papermakers' felts at Appleton, Wis.

Mr. McGinnis' territory embraces the area extending from the Georgia line to and including the mills in West Florida, Alabama, Mississippi, Louisiana, East Texas, Arkansas, Iowa, Illinois, Southwest Indiana, Tennessee, and east of a line running through Hutchinson, Kansas.

Mr. McGinnis started learning papermaking from scratch. His first experience was during summer vacation periods when he worked for the Patten Paper Co., Appleton, Wis., where his father, the late James E. McGinnis, was general superintendent.

In 1911, he became a draftsman with the Appleton Machine Co., pulp and paper machinery producers of Appleton. After three years there, he went to the Valley Iron Works Co., of Appleton, as assistant chief engineer. He became chief engineer in 1916, and remained in that position until 1927 during which period (among other things) he supervised the building of the beating, washing and bleaching equipment for Eastman's photographic paper mill.

During World War I he was engaged, through Valley Iron, in production work for the Fleet Emergency Corp. After the war one of his important tasks was development of machinery for Johns Manville plants.

In 1927, when Valley Iron Works decided to operate on the Pacific Coast, the company entered into an agreement with Smith & Watson, of Portland, Ore., the name of which was subsequently changed to Smith & Valley. Mr. McGinnis was with this business for its duration, until 1930. Then he became sales agent at Portland for Valley as well as for Wisconsin Wire Works, Appleton, Wis., John W. Bolton's Sons, James Connally Co., Hamilton, Ohio, and Ball Manufacturing Co., Brooklyn, N. Y.

From 1932 to 1935, Mr. McGinnis was Pacific Northwest representative for Pacific Coast Supply Co. Afterwards and until 1941, he was agent for Morden Machine Co. of Portland for territory embracing



WILLIAM J. McGINNIS, who recently became representative of Appleton Woolen Mills in Southern U. S. His father was Superintendent of the old Patten mill in Appleton, Wis. Bill used to tour Pacific Coast mills for equipment companies.

Minnesota, Wisconsin, Michigan, Ohio and Illinois.

He spent the first year of the war with the War Production Board's contract division. During the second year, he was with the Army Transport Command in production and expediting of marine engines. In 1944 he went into private industry war material procurement, and then into tank conversion equipment. He joined Appleton Woolen Mills in April, 1945.

Johnstones Establish Scholarship for Japanese

Robert McC. Johnstone, president of Johnstone Engineering and Machine Co., Downingtown, Pa., and Mrs. Johnstone have established a scholarship at Lafayette College in memory of their son, Robert S., who was killed by a Jap sniper.

The scholarship is for a Japanese student, or as alternate, a Chinese, Korean or Filipino or white student, if the latter intends to serve as a missionary in the Far East.

New Signs for BM&T

All up and down the Coast, the trucks of the 16 divisions of Blake, Moffitt & Towne are sporting festive new 24-in. by 36-in. signs, proclaiming the legend: "Pioneers for 90 Years." The posters are in buff, black and red, and are the same design as on the company's letterhead this year.

Blake, Moffitt & Towne was founded in 1855.

Consolidated Wins OPA Court Test

For the second time, the U. S. Emergency Court of Appeals has ordered an O. P. A. regulation set aside because it discriminated against products of the Consolidated Water Power and Paper Co. The decision was filed Dec. 10 in Washington, D. C.

According to the decision, O. P. A. Revised M. P. R. No. 451 is "defective . . . in that the prices were fixed on the basis of quality and yet all products of equal quality were not given the same price."

According to Walter L. Mead, vice president and director of sales of Consolidated, history of the firm's litigation against O. P. A. really began in 1939, when Consolidated perfected a system to make and coat book papers in a continuous operation. The process enabled Consolidated, Mr. Mead said, to market its book papers corresponding to No. 4 and No. 5 Glossy Coated White, at prices substantially less than competitors.

O. P. A. issued M. P. R. No. 451 for pricing book papers according to grades "accepted by the trade" in 1943. But Consolidated's papers were not included in the classification listing similar brands made by 17 competitors.

In Dec. 1944, deciding a suit brought by Consolidated against Price Administrator Chester Bowles, the U. S. Emergency Court of Appeals ordered M. P. R. No. 451 set aside "insofar as it denies the same grade classification and form of price control to products recognized in the book paper trade as being of equal quality."

But, Mr. Mead said, the O. P. A. then attempted to nullify the court's decision by issuing Revised M. P. R. No. 451. The amended order, he said, again improperly classified Consolidated papers in relationship to competitors' grades, despite the court's finding that "the regulation in this form resulted in discrimination between equals."

The court's recent decision sets aside the revised order, insofar as it discriminates against Consolidated's papers.

The O. P. A., Mr. Mead said, never has questioned the quality of Consolidated's papers—the discrimination was based apparently only on the firm's manufacturing methods.

Lieut. Overall Back At Georgetown Mill

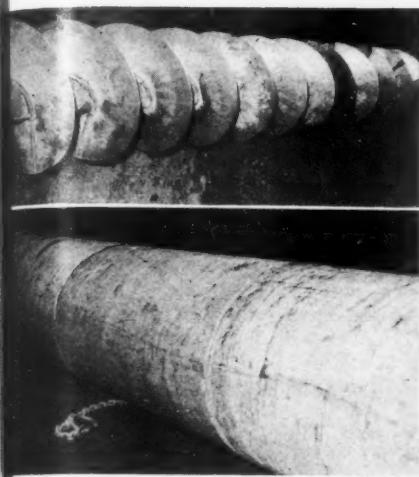
Lieutenant James E. Overall has become separated from the U. S. Navy after six and one-half years of active service, including duty on Guam, Saipan, Tinian, Ulithi, Hawaii, East China Sea, the Philippines and the landing on Okinawa, and has returned to Southern Kraft Division of International Paper Co., Georgetown, S. C.

Interlake Chemical Corp. Opens Seattle Office

Interlake Chemical Corp., Cleveland, Ohio, has opened a sales office in Seattle, Wash., to serve the forest products' industries, with John J. Bogner in charge. His headquarters are in Smith Tower, Seattle (4).

He was formerly with Durez and Caseine Companies and has been in the resin and plastic field since 1933. Interlake produces phenol formaldehyde liquid resins, molding compounds, and coal tar products.

Industry's Trend Toward Stainless Steel In Evidence at Oregon Pulp & Paper Co.



Draft tube screw (above), as fabricated from stainless steel by Esco for Oregon Pulp & Paper Co., Salem, Ore., looks like this in overall length. Below is portion of the tube. Together they constitute example of equipment used in modernization of this mill.

The inclination toward stainless steel grows in several industries, but more especially among pulp and paper mills where certain qualities of stainless steel appear to be experimentally preferred. This preference is beginning to find expression in orders for replacement of operating units which were combination materials in the old days, such as units of cast iron with rubber coated exteriors.

Such a replacement progresses at Oregon Pulp and Paper Co., Salem, Ore., where stainless steel screws and draft tubes made by Electric Steel Foundry, Portland, Ore., are being set to do the work formerly done by castiron tubes and rubber covered screws. "Red" Wagner, general maintenance man, has nothing against the older equipment, other than that units to be replaced had served their purpose and completed their service life. Wear, he says, came on the outside edges of the screw, especially at the bottom, since the screws operate vertically in the draft tubes, being driven from the top for the circulating of stock in the bleach cells.

Two of the stainless steel screws have already been installed. They consist of helical flights fabricated from stainless 10 gauge steel plate and based on a central shaft of Esco Spuncast pipe. Overall measurements of screw are: length 16 feet; overall helix diameter, 24 $\frac{3}{4}$ inches; exterior diameter of pipe, 6 $\frac{1}{2}$ inches; helix has single lead, 16 inch pitch, with 12 wraps of 360 degrees each in entire length; central pipe opening is fitted for driving by means of square driving heads fitted to the tubular center. The draft tube itself measures 27 inside diameter, with a length of 14 feet 2 $\frac{1}{2}$ inches overall. It also is of stainless steel, fabricated by Esco.

Oregon Pulp & Paper Co. plans complete renovation of the bleach plant cell installations, to include six of these stainless steel screws, according to B. B. Armstrong, superintendent.

Comparison of costs against operating life of the old and new installations are impossible to determine at this time.

St. Regis Buys Nashua River Mill

St. Regis Paper Co. has purchased the Nashua River Paper Company at East Pepperell, Mass., it was announced today by Roy K. Ferguson, St. Regis president.

The mill, a large producer of kraft paper, was bought from William H. Anders, president of the Nashua company, and Louis Calder, who together owned all outstanding stock in the firm. Mr. Ferguson said the Nashua River Paper Company will continue as a separate corporation, wholly owned by St. Regis, with Mr. Anders as president and the present management and organization retained.

This purchase was negotiated primarily to increase the supply of multiwall grade specification kraft paper in order to better equip the St. Regis bag plants to meet increasing requirements.

Multiwall type paper was born in the Nashua mill. The late A. M. Bates, who fathered the Bates multiwall valve bag idea at Chicago in the 1920s, went to East Pepperell and there developed paper of the necessary strength for his product.

A portion of the output of the Nashua company has been devoted to production of high-grade paper specialties including gummed tape, plasticized paper, crepe and coin wrap. It is intended to continue production of gummed tape and certain other of these specialties.

Mr. Ferguson said the Nashua mill

Overseas Airlines Fare New York-Stockholm \$375

The first plane of the American Overseas Airlines landed Jan. 7 at Bromma airport, at Stockholm, carrying a delegation of sixteen persons representing the civil aeronautics board and other United States authorities. All preliminaries are now finished and it is hoped regular air traffic will be inaugurated in February. For the time being the company will fly one round trip a week and the price is expected to be \$375 each way.

American Overseas Airlines' new head in Stockholm is Roger G. Flynn. James Miller, who formerly held this post, has been transferred to Oslo.

Newspapers' Paper Stocks

Newsprint stocks of American daily newspapers were down to 37 days supply last month as compared with 58 days at the same period in 1942, 44 in 1941 and 53 in 1943 and 1944.



JAMES E. ALEXANDER, graduate of Washington & Jefferson College in 1935, whose appointment as Asst. Director of Public Relations of Minnesota & Ontario Paper Co., is announced by L. A. FURLONG, Director. Mr. Alexander has been editor on a Minneapolis paper.

Viscosity Control In Production of Bleached Pulps

By Oliver P. Morgan

In the conversion to ordnance grade pulp in 1942 the need of a means of controlling the ultimate viscosity of the pulp became apparent, since unpredictable variations in the wood would give a pulp such different bleaching characteristics that a set bleaching schedule would not produce a bleached pulp consistently within the Picatinny Arsenal Tentative Specifications.

Fortunately the Research Department had developed a rapid method of determining pulp viscosity based on the use of cupriethylene diamine solvent as recommended by Strauss and Levy¹. The mechanics of the test have been fully described elsewhere². The test was adapted to laboratory requirements and a conversion curve from cupriethylene diamine centipoises to Picatinny seconds was established.

After operating for a time with chemists running the tests it was found that by using viscosity tubes with a close tolerance of bore diameter, a nomograph could be used for calculating the results. With this simplification it was decided that the work could be done by technically untrained personnel.

The bleaching procedure in effect was chlorination in the first stage, high density, high temperature caustic extraction in the second stage, and high density hypochlorite bleach in the third stage.

At first samples were taken one hour and fifty minutes after the end of the bleach liquor addition in the final bleaching stage, at the dump time in the final stage and from every third Jumbo Roll. After following these results for a time it was found that given comparable conditions of temperature, consistency and chemicals in the final bleaching stage, the drop in viscosity against bleaching time was essentially a straight line in the range that appeared practical for control. Therefore, given a viscosity early in the bleaching time, the viscosity at any later time could be predicted. A chart was drawn on coordinate paper with the viscosity at one and one-half hours as the abscissa and the resultant viscosity as the ordinate and a line for each subsequent half hour of bleaching time to show the viscosity to be expected at that time from the viscosity determined

Technical Dept., Pulp Div.,
Weyerhaeuser Timber Co.

This paper, delivered at TAPPI meeting in Longview, Wash., Feb. 5, is entered in 1945-6 Shibley Award contest for operations employees of Pacific Coast mills.



OLIVER P. MORGAN, Pulp Div., Weyerhaeuser Timber Co., who delivered paper on viscosity control of bleached pulp at the Longview meeting of TAPPI, which is entered in the 1946 Shibley Award contest.

at one and one-half hours. This chart was then used to determine the bleaching time of each engine.

The cooking process was controlled to give an unbleached pulp with a viscosity from 150-350 Picatinny seconds. Then by adjustment of the variables in the final stage of bleaching it was possible to produce a pulp very close to 75 seconds Picatinny viscosity, the midpoint of the P.A.T.S. range.

The following sampling procedure was finally adopted. (1) A composite sample of each cook was taken as it went over the blow pit oliver. The viscosity test was finished soon enough to make any necessary changes in the cooking schedule of succeeding digesters. (2) Samples were taken from every fourth 1st stage bleach engine. These were finished before the pulp left the 1st stage, allowing ample time for preliminary adjustments in the 3rd stage bleaching conditions. (3) A sample was taken from every 3rd stage engine one and one-half hours

after the addition of the bleach liquor. This sample was centrifuged immediately and the viscosity determined. The total bleaching time to give a viscosity of about 75 seconds was calculated from the chart and the bleacher was informed. (4) As a check on the results of bleaching conditions and the reactivity of the pulp, a sample was collected from every other 3rd stage engine at dump time. These results kept the viscosity tester informed about the rate of bleaching. (5) Viscosity was run on every third jumbo roll as a check on the finished pulp.

A viscosity record sheet was kept, which had the viscosities at succeeding stages of treatment tabulated in columns across the page, with the sheet divided vertically into forty-eight lines for one-half hour intervals through the day. The time differential was worked out for each sampling stage with the time the pulp came off the drier as a basis, so that the viscosity of a batch of pulp, neglecting blending could be followed through the mill by glancing across the page.

Operating with this control procedure it was possible for the operator to control the bleaching with assurance that the result would be dependable.

Observation of the sensitivity of the test to difference in wood and cooking conditions showed its probable usefulness in the production of paper grade pulp since otherwise unexplainable strength changes may be explicable in the light of variations in viscosity. As viscosity variations appear to be quite large before strength changes become noticeable, viscosity control would be particularly useful in the unbleached end of the mill. By control of the cooking cycle to give optimum viscosities without changing the bleaching characteristics of the pulp, optimum strength should be obtained without changing the bleaching schedule.

REFERENCES:

¹ Fritz Strauss, the late director of research, and his former assistant and successor, Robert M. Levy. See PULP & PAPER INDUSTRY Sept. issue, 1944, page 32, article entitled "Nature of the Cupriethylene diamine Cellulose Solvent," by R. M. Levy and P. Muffatt.

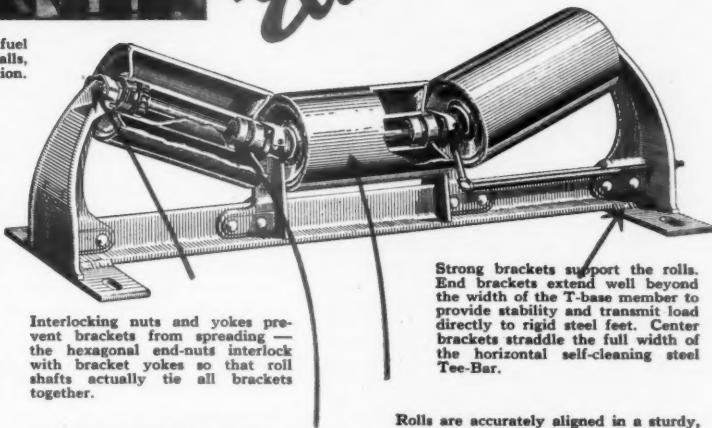
² Article by R. S. Hatch in PULP & PAPER INDUSTRY, Oct. issue, 1942, page 13.



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Some Problems In Re-Logging Of Cutover Lands

By Clarence W. Richen

Forestry, Dept. Crown Zellerbach Corp.

(Paper presented before TAPPI, Longview, Wash., Feb. 5).

At first glance, the recovery of forest waste appears to be a simple job—it is just a matter of picking up chunks, tops, torn-down trees, windfalls, and snags, putting this material on trucks or railroad cars and hauling it to the dump. But, to the logger, who has equipment designed to handle logs of large size and uniform lengths and, to the mill man, whose mill is geared for efficient handling of logs of large size and good quality, a change of diet to forest waste is apt to cause indigestion—somewhere along the line.

The recent "clean" logging and relogging activities of Crown Zellerbach Corp., while threatening to plug our digestive system in places, is bringing to light some of the mechanical and economic problems involved in the recovery of forest waste. Our company has under way two large-scale logging experiments in close utilization—one in the coastal hemlock forests of the fog belt in Clatsop County and the other in the Douglas fir stands of the Cascades in Clackamas County (both in Oregon).

On our Clatsop operations we are now attaining close utilization by "clean" logging, i.e., by taking in the first cut all the material that it is possible to remove from the ground. In pre-war days logging waste on our Clatsop cutover lands amounted to 15 to 18 cords per acre, or about 20% of the original timber stand volume. The average net length of this logging waste as it lay on the ground was 22 feet. The average diameter was 11 inches, and the average cubic contents 18 cubic feet, which means about 5 logs per cord. The range in diameters, in the main, was from 6 to 26 inches and the range in length from 8 to 56 feet. The number of pieces on the ground averaged 85 per acre.

Our company has been "clean" logging since November 1944 and the results in getting closer utilization have been very encouraging. About two-thirds of the usable logging waste formerly left in the woods has been recovered without seriously affecting operating efficiency but with, of course, some increase in logging costs. Several obstacles had to be overcome in attaining this close utilization in the woods.

The first obstacle was the measurement of fallers' and buckers' scale on small trees. Obviously, to require fallers and buckers to fall trees down to 10" d.b.h. (diameter breast high) and to buck logs to a diameter as small as 5" would call for either an adjusted rate of payment per M board feet, Spaulding scale (standard measure on Pacific Coast), or the adoption of a log rule which would measure and credit to their pay scale the total cubic volume in the tree. In recognition of this, we are now using a cubic foot rule as the scale on which our fallers and buckers are paid.

Another obstacle to "clean" logging was overcome by providing staked trucks to facilitate building up loads of sometimes as many as 30 to 35 small logs as contrasted to conventional loads of 5 to 6 logs as you now see on the highways.

The third obstacle which was overcome

was the "sinker" problem at the boom. Small hemlock logs are mostly sapwood and sink entirely or almost completely as they are unloaded in the water. These sinkers are a serious handicap to efficient booming and rafting whether at the log dump or mill slip. In addition to the sinker problem, towing this logging waste in flat rafts was almost impossible because of losses and increased costs for failure to make the minimum footage per raft requirement. The solution to this problem, at least at the log dump, was bundling logs for rafting and towing. In this operation two or three strands of 3-gauge wire are tied around the truck load of pulp timber at the boom and the entire load is lifted off the truck and lowered into the water. The bundles are then made up into rafts. As a result of bundling, rafting and towing capacity has been nearly doubled.

Thus, on our Clatsop operations where we are recovering two-thirds of the logging waste formerly left in the woods, our procedure at present in handling forest waste along with the normal run of camp logs can be summarized as follows:

1. Load by species in the woods when truck loads are to be made up into bundles for the pulp mill.
2. Weigh the load instead of scaling in the conventional way. The accuracy of scale by weight will be higher than if the pieces in the load are scaled individually.
3. When a load of pulp hemlock or spruce reaches the boom, tie the entire load with a light-weight wire which can be discarded when the bundles are broken at the mill.
4. Lower the bundles gently by power control into the water for make-up into rafts.
5. Scale and flat-raft in the conventional way high grade hemlock, cedar, spruce and Douglas fir.

Relogging Required for Complete Recovery

A recent survey of the area which we have "clean" logged shows about 8 cords per acre of usable material still left on the ground. This material is either in the form of small chunks too short to load on trucks with a loading rig designed for handling long logs, or long poles 6 to 10 inches in diameter, too small to be held by a choker and too easily broken in yarding them along with the larger logs. The character and volume of this material has brought home to us that to do a really clean job of waste recovery will probably take relogging with specialized yarding and loading equipment especially designed for handling small logs.

Development of Specialized Equipment

Our first effort in the design and

construction of specialized equipment has been a 60-foot steel tower mounted on a tractor. The tower is hinged so that the upper half can be lowered back on the tractor for moving from one landing to the next. Landings can be changed in an hour, which is quite a contrast to the time-consuming job of raising a spar tree and rigging it for highlead yarding. The portable steel tower has the additional advantage of operating off cat roads, thus making it possible to reach all parts of the cutover area through construction and use of low-cost summer truck roads. Another piece of new equipment which we are using in conjunction with the tower is a tractor with a 11-foot boom for yarding and bunching logs into cold-deck piles.

It is interesting to note that two other companies—the Soundview Pulp Co. in Washington and the Comox Timber and Railway Co., in British Columbia (supplies Powell River Co.)—have also recognized the advantage of portable highlead yarding units.

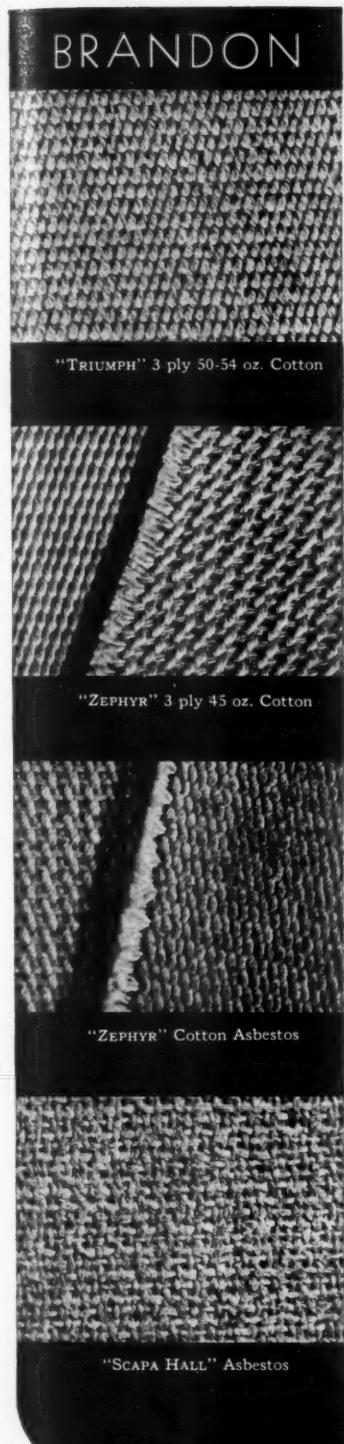
The Soundview Pulp Co. has designed and is using a portable spar tree which is a 40-foot telescoping steel tube set on wheels. The main line and the haulback lead from the power unit up through the steel tube and through blocks attached to the top of the spar. As I understand it, Soundview is well satisfied with the performance of their portable spar tree. To increase its yarding distance, they expect to use a 60-foot spar. Their plan of relogging is to cold-deck logs in tree lengths at the landing where the pieces will be bucked in 8-foot lengths and packaged into 1-cord bundles. I am told that on their first experimental area of 65 acres their recovery was 4,000 cords, which is about 60 cords per acre.

The Comox Timber & Railway Co. has used to good advantage in their relogging experiments a so-called "cherry picker"—28-foot A-frame upright boom mounted on a 2½-ton truck. This yarder, with its 3-man crew can reach out about 300 feet and log 3 to 4 acres at a setting.

Handling Problem at Mill

The Comox company, in cooperation with the British Columbia Forest Service and the Powell River Co., have experimented in handling their forest waste in bundles of random-length logs and in bundles of 8-foot logs, and they are planning to do large-scale experimenting with 32-inch bolts—a length facilitating piling and loading on trucks or scows with clam shell hoists. Harry Andrews (technical director) of the Powell River Co., suggests handling forest waste for manufacture of sulfite and groundwood pulp in the following steps:

1. Make bundles approximately 8' x 10' x 50' of truck loads—separate as to species.
2. Transport and store the bundles in the rafts.
3. Lift the bundle out of the water and break it down in the wood mill.
4. Trim logs to length with respect to use requirement and quality.
5. Hydraulic barker operation.



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6. Sort logs over 12 inches direct to the chippers for sulphite pulp if suitable from quality standpoint, or otherwise route along with logs under 12 inches to slasher and groundwood mill.

7. Develop uses for cull material. Mr. Andrews' conclusion, based on his company's experience in pulping wood waste, is that the sulfite and groundwood processes will be able to utilize a large part of the logging waste, although the sulfate process should be able to take care of it more readily because it allows greater latitude in the way of wood quality and species.

Wood Quality and Species in Douglas Fir Type

The matter of wood quality and species is of particular importance in dealing with logging waste from Douglas fir forests. In the spruce-hemlock forests, woods waste, although small in size, is of good quality and involves, in the main, only two species. However, woods waste from cutover lands of our typical old-growth Douglas fir forests is found in all sizes, in all grades, and in as many as eight species. This, as we now are leaning, brings on a difficult utilization problem.

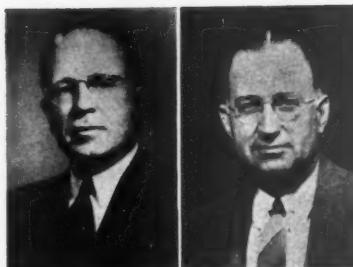
The diversity in species, sizes and grades has been brought to our attention by the results of our relogging activities in Clackamas County during the past four months. Forest waste in this area is composed of six species—Douglas fir, Western hemlock, Western Red cedar, Noble fir, White pine, and White fir. Sizes vary from 6 to 44 inches in diameter and 8 to 64 feet in length. Scale sheets of the Columbia River Log Scaling and Grading Bureau covering a 10-day test run show 22 separate log grades and species segregations. Nine of these represent saw-logs which can be routed to sawmills. In receiving the remaining 13 grades, the pulp mills will be dealing with hemlock, Noble fir, and White fir pulp logs of No. 3 sawlog quality, No. 1 and No. 2 wood logs of all species and a small proportion (less than 2%) of cull-out logs of all species.

Clackamas Relogging Equipment

In salvaging about 6 million feet of this kind of material thus far in the Clackamas area, we are beginning to recognize some of the limitations as well as the possibilities in getting logging waste to the mill efficiently and economically.

Relogging there is being done by contractors. Since all logs are hauled over a private road to our dump on the Willamette river at Canby, we weigh each truck load on a Fairbanks-Morse scale and pay the contractors a fixed rate per ton for the falling, bucking, yarding, loading and hauling job. In taking over the operation of this tract last October, we were able to get relogging under way immediately by contracting the work on a weight basis. Had we chosen to pay on any other scale, even at a rate equivalent to our present tonnage price, I feel sure that we would still be waiting for relogging to get started in this area.

As it is, we now have eight contractors relogging, some of whom have proven efficient and some of whom seem unable to handle logging waste efficiently either because of unskilled crews or the wrong type of equipment. Crews vary from two to 17 men. Production based on actual number of working days has varied for individual operations from two to seven



J. O. ROSS (left), Founder and Chairman of J. O. Ross Engineering Corp., and S. W. FLETCHER (right), President of the company, who participated in dinner party and theater party in New York on nights of Jan. 17 and 18 for 200 employees and their wives in celebration of firm's 25th anniversary. Mr. Ross was presented with beautiful silver gift from employees.

cords per man-day. It should be noted, however, that since logging began early in October, on the average, four out of every possible working days have been lost by the contractors due to snow, wind storms, high water, slides, machinery breakdowns, lack of men, rigging up or changing landings. This high proportion of lost time, of course, is apt to decrease as the season progresses.

Contractors are relogging with standard equipment. Falling and bucking is done by hand or with gas or electric power saws; yarding by tractors or with high-leads; loading with swinging booms or crotchline and tongs; and trucking with short flat-beds or standard logging trucks. The greatest obstacle to efficient operation is loading, which sets the production pace. Thus far, each of the three best producers have been able to average only 7 loads per day. This obstacle will be overcome shortly through installation of facilities at the boom for bundling. This will permit the use of 4-foot stakes on logging trucks, which will speed up loading considerably as it has done on our Clatsop operations.

Sorting Problem in the Woods

The method of relogging employed at present by our contractors does not lend itself to close inspection and selection of material, bucking for lengths and grade, or sorting by species. They are all rigged up for "hot" logging and under such a set-up bucking and selection of material for market is either done before yarding or not at all. A limited amount of sorting can be done at the landing—such as loading out saw-logs separately but sorting by pulp species and grades will have to be done at the dump or at the mill wherever bundling is the practice. In handling the waste from their relogging operations, the St. Helens Pulp and Paper Co., as I understand it, has obtained good grade recoveries by careful inspection, trimming, and sorting of logs of peeler and saw-log quality in the pond. A better job of selection or rejection of material and sorting by species and grade will come when loading can be done independently of yarding. The divorce of the two jobs will require the use of truck-mounted loaders that can load from cold-deck piles at landings, or from roads along which logs have already been bunched or yarded in windrows.

Just what importance one should place on sorting and bucking of pulp logs for

quality and highest use, is not for me to say—but the paper maker's adage "that it takes a good grade of raw material to make a good grade of paper" still holds true, I take it, even in this day of sulfate pulps.

Pulp Yields and Quality Tests

Since the pulp mills will have to utilize the lower grades of waste material, if it's to be utilized at all, pulp yields and quality tests should be made on the various grades to determine the type of material the mills can afford to handle. In this respect, the saw-log grading rules are inadequate for defining pulpwood quality.

Scaling of Forest Waste

Likewise, the scaling of this waste material by the board foot will not give an accurate measure of the wood substance which is produced, purchased and used by the mill. The cubic-foot yield per M feet, net Spaulding scale, of various grades of logging waste produced at Clackamas gives an idea of the inconsistencies of board measure. For example, one grade actually showed a yield of 270 cubic feet per M; another 143 cubic feet; while all grades averaged 222 cubic feet. In comparison, the average yield of pulp logs both in the Northwest and in British Columbia is about 176 cubic feet per thousand feet. Variations such as these are obviously absurd and make the determination of costs, based on net Spaulding scale, meaningless. The adoption of the Sorenson rule for scaling and pricing logs 13 inches and smaller in diameter on a cubic-foot basis will help to make relogging an economic reality and should be an inducement for the logger to bring in more small log material than he has done heretofore.

Future of Relogging

In reviewing the progress of relogging during the past few months, one can rightly conclude that the industry is still in an era of trial and experimentation. It would indeed be hazardous at this time to forecast that relogging or other forms of close utilization can be applied on a region-wide basis. On the other hand, the prospects for successful recovery of logging waste in local situations appear good. What is needed to help this relogging program along is:

1. A realistic method of measurement of logging waste for accurate determination of volumes and costs.
2. More promotion and development of specialized small-log equipment for handling forest waste efficiently and economically.
3. Knowledge of grade recoveries and pulp yields of various kinds of logging waste.
4. Better facilities for careful sorting by grades and species for proper allocation of material to its highest use.

It would be a dereliction of duty if I failed to call attention to the tremendous forestry values at stake in getting a successful job of relogging done. Its importance in the regional timber supply picture is obvious. Its effect in reducing fire hazard and creating excellent seed bed conditions for the establishment of new forests is equally important. Successful tree farming by industry depends on its ability to utilize all the material grown by the forest.



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REVIEW OF ALKALINE PULPING PROCEDURES IN CANADIAN MILLS

By G. F. Allo

During the past decade there has been a tremendous increase in the amount of pulp produced by the sulphate process in the United States. Canadian mills have also steadily increased production, and it is apparent that when mills now under construction, and those planned for the near future, come into operation, the amount of alkaline pulp produced in Canada will be enormously increased.

The justification for this greater production lies in a demand for strong fibred pulp. It is recognized that pulps produced by the sulphate process are superior in strength to woodpulps produced by other processes.

The strong kraft fibre has proven particularly valuable in the manufacture of corrugated and solid fibre shipping containers. Fibre containers played an important role in wartime packaging and shipping, and experience gained will no doubt result in increased use of this type of package, and in increased demand for kraft pulp.

Strong kraft pulp is unequalled in the production of wrapping paper, bag paper, towelling, twisting and other specialties.

Within recent years bleaching techniques have improved to such an extent that bleached sulphate fibre as white as that produced from sulphite pulp is available. This strong, white fibre has made possible the production of many new grades of paper.

Although the production of soda pulp has not increased in recent years, the bleached fibre plays an important part in the production of fine papers, and further, various hardwood species are utilized by this process.

Production

There are, at the present time, nine mills producing sulphate, and one mill producing soda pulp in Canada.

The total annual production of alkaline pulps is approximately as follows:

	Tons
Unbleached sulphate pulp.....	390,000
Bleached sulphate pulp.....	75,000
Bleached soda pulp.....	35,000
Total alkaline pulp.....	500,000

Control Superintendent, Bathurst Power and Paper Co., Ltd.

(Paper presented at the annual meeting of the Technical Section, Canadian Pulp & Paper Association, Montreal, Jan. 24-26, 1946.)

Most of the pulp produced is further processed at the mills into wrapping, sheathing, envelope, towelling, twisting and specialty papers, and into kraft liner, corrugating and other boards.

There are five Canadian sulphate mills either in process of construction, or planned for the near future. It is estimated, that, with the completion of new mills, a total production of alkaline pulp in the vicinity of 800,000 tons per year may be expected. This would represent an increase of 60 per cent over present production.

Progress in Equipment

The alkaline mills have kept well to the forefront in the development and application of new and improved equipment to the process. Constant efforts have been put forth to improve quality, eliminate wastes and produce more economically.

Brief mention is made of the following:

- (1) Chip packers have been used to increase digester capacity.
- (2) Circulating systems and indirect heating have helped to increase quality and uniformity, and to aid in steam economy.
- (3) Digester blow down recovery systems utilize waste heat.
- (4) Liquor recovery has been aided by new and improved pulp washers.
- (5) Recording and controlling instruments have probably found a wider use in alkaline pulping than in any other pulping process.
- (6) The application of electrical precipitation of solids in stack gases has helped to reduce chemical costs.

Present Pulping Procedures

Under the above heading it is proposed to review in a very general way the procedures followed in Canadian mills producing sulphate pulps of various grades.

The purpose of this review is to enumerate some of the many variables involved, and to show that intensive investigation of these vari-

ables will be of incalculable benefit to the industry as a whole.

1. Woods Used

At the present time it may safely be said that practically all Canadian sulphate pulp is produced from coniferous woods such as spruce, fir and pine. It is likely that for the production of highest quality long-fibred pulp these woods will continue to be used. However, many mills are attempting to find a profitable use for the large amount of deciduous woods such as maple, beech, poplar and birch which are growing on their limits.

Some mills have cooked small percentages of hardwoods along with softwoods without any change in cooking procedure. This seems to result generally in a small decrease in the strength of the pulp.

It is generally conceded that for optimum results hardwoods and softwoods should be cooked separately. This would seem logical in view of the differences in fibre structure, ease of liquor penetration, action of the alkali, and other factors. The differences in the physical properties of pulps produced from soft and hardwoods are also so great, that separate cooking and later blending if desired, would seem to be the correct procedure. Hardwood pulps are short fibred, slower, and possess only 50% to 75% of the strength of softwood pulps.

Many of the mills have experimented with separate cooking of hardwoods and some are currently producing hardwood sulphite pulp. There is, however, very little information available on the best procedure to follow. Cooks of birch have been made using exactly the same procedure and the same alkali charge per digester, as would be used in cooking spruce and fir. In other cooks of hardwood, the charge of alkali per digester was increased over that for a softwood cook, in the ratio of the wood densities, a longer period of pressure raising was used, with a slightly shorter time at full pressure. In both cases a satisfactory pulp was claimed to have been produced.

There is room for a great deal of fundamental investigation on the cooking, and on the subsequent use

of pulp from different species of wood.

2. Wood Storage

As mentioned in the previous section, practically all Canadian sulphate pulp is produced from softwoods. The wood comes to the mills by river, rail and truck, and all the softwood species are piled together. Occasionally, rail and truck wood, if greatly different in moisture content from river driven wood, will be piled and cooked separately. Western mills do pile and cook separately, some species that have widely different properties.

Where hardwoods are used, they are piled separately, although no attempt is made to segregate different species.

Most mills have probably given some thought to selective grading of wood as to species, density and moisture, but until such time as it can be demonstrated that the cost of grading will be paid for in better yield and quality of pulp, it is unlikely that it will become general practice.

3. Wood Cleaning

In common with all pulping procedures, the amount of cleaning to which the wood is subjected depends entirely on the end use of the pulp.

Pulp to be used in container board and cheaper wrappings need not be very clean, and it is often the practice to use some unbarked wood in pulping for these grades. There are in literature, references to the effect that a large proportion of chemicals is consumed in pulping bark, and that the yield of pulp is small. One authority states that over a range of 0 to 25% bark, the active alkali required per ton of pulp is a straight line function of the percentage of bark, and increases at the rate of 13.4 lb. of active alkali for each per cent of bark.

4. Chipping

The average sizes of chips made

in Canadian mills does not vary greatly, the range being $\frac{1}{2}$ " to $\frac{3}{4}$ " with the latter by far the most common.

Chips over one inch size are separated and sent to a crusher or re-chipper, while sawdust passing a $\frac{1}{8}$ " square mesh is rejected and usually burned in a refuse boiler though occasionally wasted.

The general opinion of the industry is, that within reasonable limits, chip size is not important, but that uniformity of size is definitely to be desired.

Alkaline liquors penetrate the wood more rapidly than acid, so that a longer chip may be used than for the sulphite process. This has certain advantages in reduced power consumption in chipping and a higher percentage of long fibres in the pulp. Investigations on just how far it is possible to go in increasing chip length might well yield some profitable results.

5. Charging the Digester

In charging wood to the digesters, some of the mills have used mechanical or steam packing to increase the charge. Many have found that any form of packing seems to interfere with circulation and to result in digester hang-ups.

Spent liquor is usually added to the digesters for the following reasons:

- (a) To dilute the white liquor which is usually made up stronger than required for cooking.
- (b) To save the chemicals in the liquor without costly evaporation.
- (c) To utilize the heat in the liquor.
- (d) To aid in penetration.

The volume of spent liquor used in various mills ranges from 10% to 50% of the total liquor charge.

Normally 10% to 25% of the chips are added, then spent liquor and

finally white liquor, but there are variations of this procedure.

6. Cooking

The cooking cycle normally consists of three stages,

- (1) The pressure raising and penetration period.
- (2) The full pressure period.
- (3) The pressure reducing period.

There are of course exceptions to this. In making hard stock for container board it is not unusual to blow the digesters soon after full pressure is attained, and it is sometimes felt that any advantages gained by the time consumed in pressure reducing are more than offset by the loss of digester time.

There are a number of variables in the sulphate cooking process, all of which affects the final quality and yield of pulp. By manipulation of these variable different types of pulp are produced. The important factors involved may be listed as follows:

- (1) Wood species, density, moisture.
- (2) Uniformity of chip size.
- (3) Ratio of chemical to wood.
- (4) Concentration and composition of cooking liquors.
- (5) Time to raise pressure.
- (6) Time at full pressure.
- (7) Maximum temperature and pressure.
- (8) Relief practice.

The following figures from Canadian mills will serve to illustrate different treatments of some of the variables mentioned¹.

As can be seen from table 1, if a hard stock such as liner or board stock is being cooked, a high degree of delignification is not desired, so that a low charge of alkali is used and temperature is brought up rapidly. In this case the concentration of alkali at high temperature is fairly low so that degradation of cellulose is low, and a strong pulp is produced.

In producing a bleachable type of

TABLE 1

Type of Pulp Wood Used	For Corrugating Board, Birch, Maple, Birch	Bleachable Mixed Soft	Liner Stock Mixed Soft	Paper Stock Mixed Soft	Hard Stock W. Hemlock, Sitka Spruce
Av. chip size	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$\frac{5}{8}$ "
% Active Na ₂ O based on air dry wood	10.0%	21.0	13.5	18.8	14.0
Cooking liquor—Lb. Na ₂ O per cu. ft.					
NaOH	3.50	2.58	3.50	4.63	4.30
Na ₂ S	2.78	1.16	2.78	1.93	1.60
Na ₂ CO ₃	.64	.64	.64	1.10	1.00
Na ₂ SO ₄	.36	.20	.36	.18	0.10
Lb. Na ₂ O/ton a.d. pulp	420	830	516	750	565
Time to max. temp. hr.	$\frac{2}{3}$	2	$\frac{1}{4}$	2	1
Max. temp. deg. F.	335	335	335	347	350
Time at max. temp. hr.	0	$1\frac{1}{4}$	$\frac{3}{4}$	1	$\frac{1}{2}$
Circulating system	None	1st 2 hrs.	None	Yes	None
Indirect heating	No	1st 2 hrs.	No	Yes	No
Direct heating	Yes	To blow	Yes	...	Yes
Volume spent liquor	50%	10%	50%	50%	None

pulp it is desired to remove the greatest possible amount of impurities at fairly low temperatures so that the cellulose is not attacked. In this case the charge of alkali is higher and more time is taken to reach maximum temperature. Delignification takes place at lower temperatures, and the alkali concentration is less when full pressure is reached, so that attack on the cellulose is minimized.

These are the extremes in sulphate cooking, and of course, in between there are many variations of alkali charge, temperature, time and so on, depending on the type of pulp it is desired to produce.

The rate of pulping is increased by higher temperatures and higher alkali charge, temperature, time and cellulose is also increased, and lower temperatures and charges would produce pulp of maximum quality and yield. However, from the standpoint of economy it is necessary to cook quickly and thus a compromise has to be made.

There is a wide variation in the sulphidity of liquors used by the various sulphate mills from (27% to 38%). It would seem from the literature that at each alkali-to-wood ratio there is an optimum sulphidity requirement for best results. Definite data on this point would be useful.

Figures on experimental mill scale cooks using mixed hardwoods are also shown in table 1.

In this case a mixture of beech, maple and birch was being cooked and a hard stock suitable for corrugating board was desired.

Previous cooks using 13% active alkali based on a. d. wood had been made and the resulting pulp had been too soft for the desired purpose (Chlorine No. of 2.2).

Active alkali was reduced to 10%, and digester pressure was brought up to the maximum in 2 1/4 hours. Samples taken at this time indicated that the stock was sufficiently cooked, so that the digester was immediately blown.

The test results shown in table 2 give an idea of the characteristics of this pulp as compared to a cook of softwood stock.

It may be of interest to point out that in washing and filtering a hardwood stock of this kind, the capacities of the washers and vacuum filters were greatly reduced due to the lower freeness and much shorter fibre length. It was also much more difficult to remove black liquor so that residual alkali in this stock was about 30% higher than on a normal softwood pulp.

TABLE 2

	Hard- wood Stock	Soft- wood Stock
Roe Chlorine No.....	6.5	12.0
Freeness.....	629	700
Unbeaten strength (points per lb.).....	0.28	0.70
Fibre classification (Bauer).....		
% retained on 14 mesh.....	9.40	51.17
" 28 mesh.....	13.78	15.55
" 48 mesh.....	30.98	19.44
" 100 mesh.....	27.58	4.60
Passed.....	100 mesh.....	9.24
Total.....	100.00	100.00

Note: Knots and slivers removed before testing.

It is not claimed that this is the best method to use in cooking hardwood. The figures are given only as a matter of interest and to point out that there is a very wide field for investigation in the cooking of various hardwood species.

Due to lack of sufficient information the effects of forced circulation and indirect heating on pulp quality, yield, and economy, have not been dealt with. A paper on this subject alone would be of interest and value to the industry.

Conclusion

The foregoing is merely an outline of present practices in sulphate pulping from the wood pile to the blowing

ing of the electric digester charge.

All the mills have no doubt carried out experimental work in order to improve their methods, and most pulp makers firmly believe that present methods can be improved.

In summarizing present pulping practices a number of questions must present themselves to the pulp makers:

Should different species of both hardwoods and softwoods be stored and cooked separately?

Should woods of widely varying moisture content or density be cooked separately?

What effect have the chip size on pulp quality?

What effect have the following on quality and economy: sulphidity, amount of spent liquor used, temperature, chemical charge?

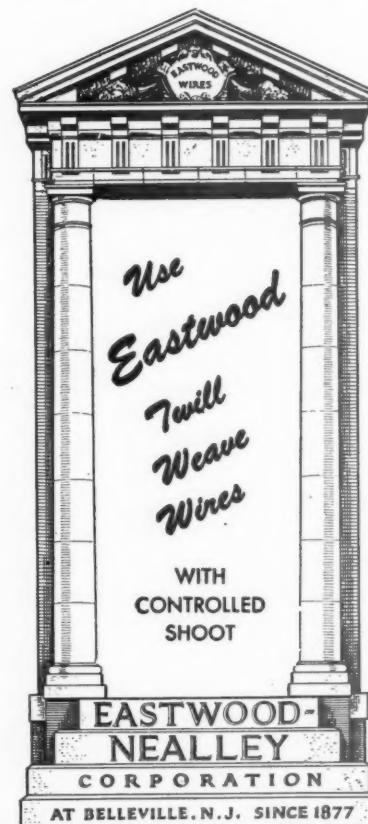
What procedure should be followed to produce pulp of maximum quality from the various hardwoods?

With the above question in mind the Pulp and Paper Research Institute of Canada, at the suggestion of the Alkaline Pulping Committee of the Technical Section, is undertaking an extensive investigation into the many variables inherent in sulphate pulping. A small scale digester equipped with a circulating system and indirect heating, has been made available, and work on this project has already commenced. It is realized, of course, that differences exist between laboratory and mill scale equipment, but it is felt that fundamental data on sulphate cooking can be obtained that will be applicable to mill operation.

The Committee is confident that this investigation will extend definite benefits to the industry in its efforts to produce more and better alkaline pulp.



SIR KEITH PRICE (left), managing director of Price & Pierce, Ltd., of England, internationally known pulp and lumber broker, recently paid his first visit to British Columbia since the outbreak of war, accompanied by DR. JOHN S. BATES (right) of the Canadian head office organization in Montreal. They toured the Powell River Co. mill, for which Price & Pierce are unbleached sulfite distributors for the United Kingdom and Europe.





FAMILIAR FACES ARE IN THIS PICTURE for mill men in all parts of the U. S. These are the officers and salesmen of the Lockport Felt Co., Newfane, N. Y., in picture taken at their annual meeting Jan. 16-17. Seated, left to right: H. F. Brown, Superintendent; H. J. Smith, Mill Manager; Wm. H. Lee, President and General Manager; B. A. Audley, Secretary; R. J. Lee, Treasurer; L. D. Carner, Personnel Director. Stand-

ing, left to right: T. M. Gillespie, Midwestern Representative; E. J. Johnstone, Engineer-Sales; F. W. Drake, Southern Representative; C. F. Wellington, Purchasing; A. J. Smith, Assistant Superintendent; C. W. Wallace, Accountant; W. W. Campbell, Mid-Atlantic States Representative; A. B. Julin, Northern Representative; A. C. Dunham, West Coast Representative; and G. W. Hardaker, South-Central Representative.

More About Norway's Sulfite Mill Which Cooks With Ammonia Base

More recent information about the operation of the Toten mill of Norway, where an ammonia base is used in cooking sulfite pulp, was given to PULP & PAPER INDUSTRY this month by Jacob Dahl, engineer and representative of Norsk Hydro, the company which operates the unusual mill.

Mr. Dahl, who has visited mills in New England, Quebec, Wisconsin, Washington and the South in recent weeks, winding up his extensive travels in New York for "Paper Week," was interested in obtaining a copy of the article published in the October issue of this magazine, describing the Toten operation.

It stated that more than 100,000 tons of bleached sulfite pulp had been made at Toten since 1935 with a cooking acid averaging 8% total and 1% combined SO_2 -Ammonia (NH_2) with consumption of about 92 lbs. per ton of pulp. Ammonia water is made in a special absorption tower.

Mr. Dahl explained that an important reason this mill uses ammonia is that it is one of the chemical products of the parent company, Norsk Hydro, and the before was available to the mill at low cost. He expressed the belief that as a result of wartime developments, ammonia may be cheaper in the future.

Until the resumption of operation of the Shelton, Wash., mill of Rayonier Incorporated this winter, using

an ammonia base, the Toten mill was said to be the only one in the world using this chemical in its cooking process.

Norsk Hydro, Mr. Dahl's company, is principally in the business of nitrogen products and fertilizers. The Toten mill is reported to have sold annually 2,000 tons of waste liquor, half as dry powder and half as 60% solids. The latter has been mixed with coal for fuel. Evaporated liquor is also used in tanning hides.

When it started its Toten operation, Norsk Hydro naturally was anxious to demonstrate that the use of ammonia would work. Mr. Dahl says it has done so and has operated continuously with ammonia during all of the ten years, without any reversion to the standard lime use, as has been reported.

The advantages resulting from ammonia use, he said, were that the company has been able to develop a fuel supply from its waste liquor; that it gets a higher yield of pulp, and is able to cook at low temperatures. He agreed that economic considerations in some regions might make ammonia use impractical.

Mr. Dahl was impressed by the expansion of the U. S. Forest Products Laboratory at Madison, Wis., which he had last seen in 1929, and also the work being done at the University of Washington in Seattle and at the Institute of Paper Chemistry in Appleton, Wis., on sulfite liquor use or disposal.

Sutherland Brothers, Colonels In Army, Return to Business

Douglas G. Sutherland and Lionel M. Sutherland have returned actively to the Sutherland Refiner Corp., Trenton, N. J., as vice president and secretary-treasurer, respectively, according to D. Manson Sutherland, president. The two brothers, sons of Mr. Sutherland, were recently discharged from the Army with the rank of lieutenant-colonel. Lionel was in the service five years and Douglas, four.

They are attending the "Paper Week" programs with their father in New York City this month, and following the convention the senior Sutherland expects to make a business trip to the west coast.

A. B. Julin to Represent Lockport Felt Co.

The Lockport Felt Company, located at Newfane, N. Y., has announced that A. B. Julin, of Watertown, N. Y., has been chosen as their new representative in the Northern New York State area. Mr. Julin replaces the late John S. Harrington.

Bureaucrats, Incorporated, Has Serious Purpose

On January 22 in the staid shadows of New York's Harvard Club a new organization called "Bureaucrats, Incorporated" met at luncheon for the first time. Eighteen were present at this first meeting but the list of those eligible for membership is much longer—all those in the pulp and paper industry who held wartime executive jobs with government bureaus in Washington, D. C.

Robert Evans, who headed WPB pulp allocations last year, acted as chairman at the first meeting. The name of the group is tentative, for behind the humorous name is a serious purpose: the retention of associations and the continued exchange of information among men who, in many cases, had no continuous connections before the war.

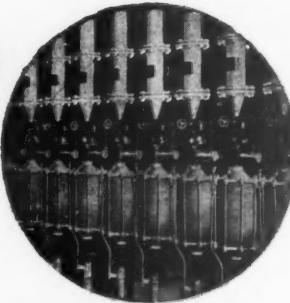


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Bud Basom Returns From War Service

Bud Basom, son of Vern Basom, resident manager, Port Angeles, Wash., division, of Fibreboard Products Inc., has ended 3½ years service in the Coast Guard and recently returned to work in the Port Angeles mill's shipping department. But he was not there long, as he left on Jan. 28 to enter Washington State College.

Bud saw a lot of places in the Pacific —Guam, the Philippines, Saipan and Japan proper.

Herman Hansen Named Councilman

Herman L. Hansen, manager of the Anacortes (Wash.) division of the Coos Bay Pulp Corp., was named to the Anacortes city council in January.

Coos Bay Buys Timber

Coos Bay Pulp Corp., western subsidiary of Scott Paper Co., has purchased 1,000 acres of timberland in the Coos Bay, Ore., watershed. Mostly second growth covers the area. Intensive reforestation will protect the watershed.

Tyler Returns

James Tyler, foreman for the Pacific Coast Paper Mills in Bellingham, Wash., is now back at his job after over two years with the United States Army. Mr. Tyler, who was a sergeant in a combat medical unit, saw service in the Pacific Theatre.

A New Technical Director?

Eric Ericsson, technical director of Puget Sound Pulp & Timber Co., was wearing a broad grin as he passed out cigars recently, for he is the father of a boy, Mark Stephen, who arrived on Jan. 27, at Saint Joseph's Hospital in Bellingham, Wash. Mark is the first child born to the Ericssons.

Service Pins

Among the service pins given out by H. L. Zellerbach, president of the Zellerbach Paper Co., San Francisco, Dec. 28, were three pins to sons of present or deceased Zellerbach employees.

These were Warren Wells, son of Merton Wells; Morton Simon, son of Joe Simon; and R. J. O'Farrell, son of Gus O'Farrell.

Among the recipients of service pins (and years of service) were: Palmera Cerini, 20; Florence Campbell, 25; Peter Diehl, 25; W. E. Burchfield, 25; Finley Hunt, 25; Bernice O'Berst, 25; Fred Johnson, 25; Joe Orlando, 25; Gene Gohrman, 25; R. J. O'Farrell, 25; Leo Schoenfeld, 30; and Victor Barr, 35.

Rejoins Everett P.&P.Co.

George D. Frey, recently released from the armed forces, has been placed in charge of the stationery and converted items department of Everett Pulp & Paper Co. for northern California and San Francisco areas.

Mr. Frey, who has been connected with the company for several years, at the company's mill at Everett, Wash., and also in Los Angeles, will make headquarters at 244 California St., San Francisco.

Abbotts Have Junior

There is another youngster in the William F. Abbott home in Bellingham. Bill, Junior, is the son of the Puget Sound Pulp & Timber Co., research chemist, and is welcomed by a two-year old sister, Gretchen. Their maternal grandmother is Mrs. F. F. Powell, city councilwoman of Seattle.

Extends Log Boom

The office of the war department district engineer, Portland, Ore., has received application from Crown Zellerbach Corp. for a permit to extend its log boom in the Lewis and Clark River some 2.8 miles above its mouth. The proposed boom will extend 1,000 feet upstream from the present structure.

Logs so boomed are for coastwise and Columbia River movement to either the West Linn, Ore., or Camas, Wash., mill.

Wardle Returns to St. Helens

Joseph A. Wardle has returned to St. Helens Pulp & Paper Co., St. Helens, Ore., after nearly three years of service with the Seabees as water tender, 1st class, on Guam and the Hawaiian Islands. Previous to joining the Seabees he was a fireman at St. Helens for 13 years.

Bowling

Bowling got off to a good start in the Puget Sound Pulp League in Bellingham with eight teams lining up for the start. A new addition this year is the team from the ethyl alcohol plant. The Distillers go under the name of "Gin Mill," and so far have shown their potency by winning more than they've lost.

R. E. Brown Transfers To Hoquiam Mill

Dr. Robert E. Brown was transferred Feb. 1 from the central research laboratories of Rayonier Incorporated at the Shelton, Wash., mill to the management staff of its Grays Harbor division at Hoquiam, Wash.

Dr. Brown has been at the Shelton laboratory for 15 years. He took his undergraduate work in chemistry at Miami University where he received the degree of bachelor of science. He obtained his master's at Princeton and received his doctorate at Iowa State. He entered the industrial field in 1931 as a member of the research laboratory executive staff of Rainier Pulp & Paper Co., a predecessor of Rayonier.

Russell Erickson Joins Rainier

Russell F. Erickson has become plant engineer with Rayonier Incorporated at its Fernandina, Florida, mill, it is announced by James T. Sheehy, resident manager.

Mr. Erickson was plant engineer for Hollingsworth & Whitney at Mobile, Ala., for the past five years. Prior to that, he was with the engineering firm of George F. Hardy in New York.

At Fernandina, he succeeded Oliver J. Ashford, who has joined the new development division of Simpson Logging Co., in Shelton, Wash.

New Rayonier Offices in Fernandina

Rayonier Incorporated started work in December on a new office building in Fernandina, Fla., to house the land and timber department of its Fernandina Division, which includes the land management and wood procuring sections, after March 1.

The modern air-conditioned building will be one story, of concrete block and glass brick construction and will contain approximately 2500 feet of floor space. It will provide six suites of offices, a reception room, lounges, stationery room, etc. It will cost \$18,000.

A. G. McArthur is manager of the woods department, and H. D. Cook, assistant manager.

Reynolds of Gulf States Won Croix de Guerre

Major William G. Reynolds, a chemist with Gulf States Paper Corp., Tuscaloosa, Ala., returned from 20 months overseas wearing five battle stars, the Bronze Star, and an Oak Leaf Cluster. Also, on Sept. 4, he was awarded the Croix de Guerre for his "leadership and skill" in 1944 in coordinating successful resistance to a powerful panzer attack.

Major Reynolds was a staff officer of the 5th Armored Division.

Oregon P. & P. Co. Buys Out Spaulding

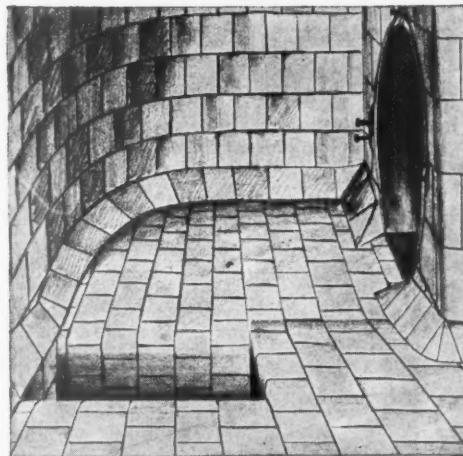
Oregon Pulp & Paper Co., Salem, Ore., has purchased timber and land holdings and equipment of Charles K. Spaulding Co., Portland, Ore., operators for over 55 years in Oregon. Consideration was set in excess of \$400,000.

One hundred million feet of standing timber in western Polk County, some 55,000 acres of logged off land, a sash and door factory, and a retail lumber yard, were included.

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*Consult Stebbins when
lining problems arise.*



Union Bag Curtails To 5-Day Week, Too

Wet weather extending for several weeks through December and early January caused the Union Bag and Paper Company, the largest integrated plant in the United States, to curtail its operations to a five day week, according to announcement of T. T. Dunn, resident manager.

The plant is on the Savannah river, at Savannah, Ga. Closing down for weekends became effective with that of January 7-8 and was to continue only a few weeks.

Masonite Executive Dies

Funeral services were conducted in Glendale, Calif., for the late John H. Thickens, who retired as vice president in charge of production of the Masonite Corp., Laurel, Miss., during 1945.

A native of Appleton, Wis., the deceased was an engineer graduate of the University of Wisconsin. He joined the Masonite plant in 1928 and during the time intervening to his retirement due to ill health he instituted shorter working hours, insurance and medical care for employees. He died Jan. 28, at 61 years of age.

Darrow Joins Writing Paper Assn.

John Darrow, until recently a captain in the U. S. Army, has returned to civilian life with the Writing Paper Association, New York City. A Middlebury graduate, Mr. Darrow was with the government in Washington before the war, and was at one time Washington representative for AP&PA.

Col. Clark Leaves Quartermaster Depot

Lieutenant Colonel James d'A. Clark, the head of the Subsistence Laboratory Army, Chicago, has returned to civilian life with honorable discharge.

Col. Clark, known widely in the paper-paperboard industry for his work in helping to develop accepted tests and standards for high strength packaging materials, is active in the Chicago Professional Paper Group, which meets every third Monday in the Field Building of Chicago in the Bar Association clubrooms. Recently he made a talk on this subject at the CPPG meeting, especially dealing with moisture barrier materials.

Returns to Mill

Lieut. Jack W. Warner, son of H. D. Warner, secretary and treasurer of the Gulf States Paper Corp., has returned to the mill after having served with the 124th Cavalry in the India-Burma-China war theatre. He was a member of the famous combat organization known as "Merrill's Marauders."

Returns to Job

Lieut. Col. Leonard Engeman, a Minneapolis war hero, has returned to his desk on the headquarters sales staff of Minnesota & Ontario Paper Co.

His quick action in sending his tank battalion to capture Remagen bridge over the Rhine allowed the first American troops to cross the river. He followed the tanks in a jeep and still held the bridge while explosives damaged its flooring.

Roy Shaneman Joins Penn Salt Sales

Roy Shaneman, brother of Fred C. Shaneman, president of Pennsylvania Salt Co. of Washington, has been honorably discharged from the U. S. Navy and will be in charge of sales of certain products of the Portland, Ore., plant of Penn Salt.

Roy was formerly in charge of the St. Louis office of Penn Salt.

Navy's Certificate for Pioneer Rubber Mills

Pioneer Rubber Mills, of San Francisco, factory in Pittsburgh, Calif., manufacturers of industrial rubber goods, has been awarded the U. S. Navy's certificate of achievement.

Pioneer furnished rubber products and fire hose for carriers and other ships to the U. S. Navy throughout the war.

Simonds Saw & Steel Adopts New Trade Mark

Modernization of the Simonds Saw and Steel Co. includes the adoption of a new trade mark which will be used also by affiliated companies, Simonds Canada Saw Co., Ltd., Simonds Steel Mills at Lockport, N. Y., and Simonds Abrasive Co., Philadelphia.

This new mark is one outward sign of the close cooperation between these several units of the parent company, and the new trademark is shown in the company's advertisement in this issue of *PULP & PAPER INDUSTRY*.

Simonds Saw and Steel Co. has been a foremost producer of cutting edges for industry for the past 114 years. Its record is that of one family and one company since its founder, Abel Simonds, began the manufacture of scythes in 1832.

H. L. Kutter Retires As President of Black-Clawson

Herman L. Kutter has retired as president of the Black-Clawson Co., rounding out a varied career in the paper industry, covering a period of major changes, many of which he helped to bring about. Completing 50 years service with the Black-Clawson Co. alone, Mr. Kutter's career is typically that of the American tradition of self-made men.

He was a qualified paper maker when he came to America at the age of 19. He is credited with being the first man to successfully put a sheet of paper over a Yankee machine in this country.

H. D. Martindale of Middletown, who has been vice president, succeeds Mr. Kutter as president. The latter continues as a director.

Other changes in the Black-Clawson organization were the naming of L. O. Kiehorth, secretary, as secretary-treasurer, and appointment of R. L. Kutter as assistant to the president. Other officers, including Allan Hyer, Adam E. Bridge, Cliff R. Crawford and John D. Haskell, all vice presidents, were reelected, as were the directors of the company.

F. C. Huyck & Sons Honors Veteran Employes

To honor more than 500 men and women who have been with the organization for ten to fifty years, F. C. Huyck & Sons, Albany, N. Y., recently held two dinner meetings which also observed the company's 75th anniversary.

To the first dinner were invited about 200 with the company 25 years or more, including three with records of more than 50 years of service.

A second dinner was held for more than three hundred, who completed 10 to 25 years of service.

Certificates of service and citations were presented by Woolsey W. Weed, president, and F. H. Eldridge, vice president and general manager.

Stanford Blakinship Joins Perkins-Goodwin

Perkins-Goodwin Co. announces that Stanford G. Blakinship has joined their pulp department. Mr. Blakinship was for many years General Pulp Superintendent of the Brown Co., later Production Manager of Port Royal Pulp & Paper Co., and President of the Port Royal Sales Co. He is also a past President of the American Pulp & Paper Mill Superintendents Association and a member of TAPPI for many years.

Chas. Ruderman Offers Entire Town for Vets

Charles Ruderman, owner of the Ruderman Machinery Exchange, Governeur, N. Y., and well known in the paper industry in northern New York, came up last month with a tangible partial solution to the housing crisis. He offered an entire village as a residential center for disabled veterans of World War II.

Himself a disabled veteran of the first World War, Mr. Ruderman some time ago purchased the village of Piercefield in St. Lawrence County, from the International Paper Co. Ten years ago it was a thriving paper mill town, and even today the property is assessed at \$250,000. Forty-five families live in the community which once had 1,000 population, but 35 of the houses are vacant.

Call **REPUBLIC**
INDUSTRIAL

IF CORROSION
is your piping problem...

SARAN
Thermoplastic
PIPE

CORROSION RESISTANT TO MOST
CHEMICALS • ABRASION RESISTANT
LIGHTWEIGHT • STRONG • DURABLE

Available in sizes from 1/2" to 4" diameter, with flanges, elbows, tees and other fittings. Perfect fused joints can be made in shop or field in a matter of seconds. Only 1/4 the weight of same-size iron pipe, SARAN has definite advantages in handling and installing.

Republic also has rubber-lined pipe and fittings, Koroseal, plastic coatings and other corrosion resistant materials.

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LITERATURE AVAILABLE TO YOU

BLACK-CLAWSON, SHARTLE & DILTS CO. in the Jan. Messenger illustrates with new pictures many of its products, including some machinery developed during the war.

THE BRISTOL CO. of Waterbury, Conn., has published a catalog on Bristol-Witham pulp and paper mill instruments. The company recently took over the Witham line.

INGERSOLL-RAND CO., 11 Broadway, New York 4, has published a 20-page 2-color catalog covering design, construction and engineering details of its Cameron single-stage general service pumps, for capacities to 25,000 gpm., against heads up to 300 ft.

ELECTRIC STEEL FOUNDRY CO., 2141 N.W. 25th, Portland 10, Ore., has issued a very complete and amply illustrated 24-page folder entitled "Esco Stainless Steels for Ultimate Economy" (special folder No. 157) which describes the alloys developed by the company, gives specifications, dimensions and other information on many products.

The following issues of Pacific Pulp & Paper Industry are needed to complete our files: June 1933 and June 1937. Anyone wishing to sell these numbers, please communicate with Box No. 26, Pulp & Paper Industry, 71 Columbia St., Seattle 4, Wash.

Positions Wanted by Veterans

"And so, my fellow countrymen, I report to you that your sons and daughters have served you well and faithfully . . . They are home-ward bound . . . Take care of them." —General Douglas MacArthur.

PULP & PAPER INDUSTRY offers to publish in these columns — without charge — the "classified advertisements" of bona fide ex-service men and women who have served in any of the armed services of the United States and Canada.

WANTED: Supervisory position. A returned veteran (home in Pennsylvania) with past experience of nineteen years in paper industry in executive capacity, would be very grateful for any information with reference to employment in Pacific Coast territory. Reply Box D, Pulp & Paper Industry, 71 Columbia St., Seattle 4, Wash.

WANTED: Position in industrial engineering, purchasing, production control or planning. Discharge from army air corps imminent. Rag-weed allergy requires move from midwest; favors Pacific Coast opportunity. Experience: five years in aircraft industry, operated mercantile business, purchasing agent, production supvr. Box A.

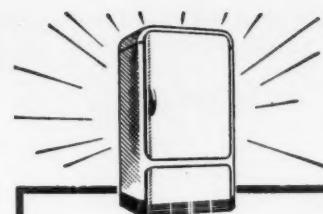
WANTED: Position in technical direction or administration by graduate of University of Washington. B. S. degree in chemistry. Two years in Navy—Alaskan service. Spent number of years in western pulp and paper mill in laboratory and supervision. Reply Box E, Pulp & Paper Industry, 71 Columbia St., Seattle 4, Wash.

CONFIDENTIAL EMPLOYMENT SERVICE FOR PAPER AND PULP MILLS

WE INVITE CORRESPONDENCE WITH EMPLOYERS SEEKING EXECUTIVES AND EXECUTIVES SEEKING NEW POSITIONS.

CHARLES P. RAYMOND SERVICE, INC.

PAPER MILL DEPARTMENT
294 WASHINGTON STREET
BOSTON, MASS.



Scientific FOOD PROTECTION

An electric refrigerator is a "must" on thousands of post - victory buying lists in Puget Power's territory. And, no wonder! It costs so little to operate. Only 44c per month . . . less than a cent and a half per day at the average Puget Power all-electric rate.

*Join the Parade of Push-button Housekeeping
— See Your Electric Appliance Dealer*

PUGET SOUND POWER & LIGHT CO.

Murphy and Buist Form Separate Companies

The Los Angeles paper manufacturers representative firm of Murphy and Buist, which was formed a number of years ago has been dissolved, as of Dec. 1.

The Gordon Murphy Co. will represent the Fox River Paper Corp., District of Columbia Paper Mills, The Gardner-Richardson Co., Bulkley Dunton & Co., and Cofax Corp., and will maintain offices at 667 I. W. Hellman Bldg., 124 West 4th St., Los Angeles, phone Vandike 8759.

Norman A. Buist will continue to represent McLaurin-Jones Co., Crocker Bank Papers, Inc., Lowe Paper Co., A. M. Collins Mfg. Co., and Narragansett Coated Paper Corp., with offices at 124 West 4th St., 668-669 I. W. Hellman Bldg., phone Tucker 6373.

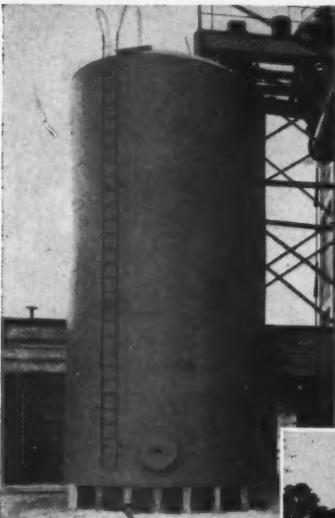
Fricke Moves to Seattle

A. W. Akers, Seattle manager of the Zellerbach Paper Co., announces the appointment of Ray Fricke to be manager of the wrapping paper merchandising department of the Seattle division.

Mr. Fricke was formerly in the headquarters wrapping paper merchandising department in San Francisco, where he was assistant to Parnell Shuttleworth.

New Warehouse

Michael & Louis Brodovsky, owners of the Valley Paper Co., Front & L Sts., Sacramento, Calif., are planning the construction of a new warehouse and distributing center at an estimated cost of \$100,000 on R Street, between 23rd and 24th Sts.



• Above: A 40,000-gal. hot water tank which we erected at a pulp mill.

• Right: A 40-ft. diam. by 20 ft. high water storage tank providing suction for a fire pump at a pulp and paper mill.

FLAT-BOTTOM STEEL STORAGE TANKS

... help mills guard against production interruptions

• Unless a mill has adequate storage facilities for water and chemicals, unforeseen transportation and supply difficulties may interrupt production schedules. We have designed and built many types of welded steel storage tanks for pulp and paper mills to help them maintain smooth production. These units, from blue print to final installation, are built to meet specific paper mill requirements.

In addition to flat-bottom storage tanks, we also build elevated water tanks, diffusers, bins, digesters and cookers.

Address our nearest office for quotations when you need equipment of this type.

CHICAGO BRIDGE & IRON COMPANY

Chicago 4, 2445 McCormick Bldg.
New York 6, 3350-165 Broadway Bldg.
Cleveland 15, 2267 Guildhall Bldg.
Los Angeles 14, 1459 Wm. Fox Bldg.
Plants at Birmingham, Chicago and Greenville, Penna.

Washington 4, 703 Atlantic Bldg. Philadelphia 3, 1653-1700 Walnut St. Bldg.
Atlanta 3, 2143 Healey Bldg. Birmingham 1, 1511 North 50th St.
Tulsa 3, 1651 Hunt Bldg. San Francisco 11, 1217-22 Battery St. Bldg.
Houston 1, 5643 Clinton Drive Detroit 26, 1566 Lafayette Bldg.

— In Canada: Horton Steel Works, Limited, Fort Erie, Ont.



• Below: Three 28-ft. diam. by 25 ft. black liquor tanks which we designed and built for a pulp and paper mill.



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TO BRITAIN, SOUTH AMERICA
AND ALL OTHER
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